

Kentucky Rural Water Association

Helping water and wastewater utilities help themselves

Memorandum

To: KRWA Member Utilities
From: Andy Lange
Assistant Director
Date: May 25, 2017
Subject: 2017 KRWA Compensation and Benefit Survey Results

Please find enclosed the 2017 KRWA Compensation and Benefit Survey results. We hope that the information compiled from this survey will give you a basis in your effort to provide equitable compensation and benefit packages for your employees.

We received a 41% response to the survey (140 out of 349 utilities) which provides salary and benefit information for over 1400 full-time employees. To ease in the interpretation of this data, we have broken down the information by type of utility (water district, municipality, etc.) and size (by number of connections). For each utility category, salaries are presented on an annualized basis with the minimum, average and maximum salary for each position. The wage information has been annualized using 2080 hours per year for full time employment. Please take into consideration that years of service, geographic location, and sophistication of operation have not been factored into this survey.

Benefit information is presented for each type and size of utility only in respect to whether a utility offers the benefit to its employees.

Thank you for participating in this survey. If you have specific questions concerning compensation and benefit issues, please give us a call and we will try to provide assistance.

Enclosures

All Utilities (136)

ANNUAL SALARY RANGE

<u>Position</u>	<u>Count</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Manager/Superintendent/CEO	99	\$26,000	\$63,437	\$121,600
Assistant Mgr/Supt/CEO	33	\$23,272	\$51,024	\$88,425
Finance Director/Accountant	19	\$30,680	\$60,216	\$95,800
Engineer	7	\$74,048	\$82,076	\$111,537
City Clerk/Office Manager	92	\$16,640	\$39,338	\$74,152
Assistant Clerk/Office Manager	42	\$21,840	\$34,671	\$56,887
Bookkeeper	30	\$16,640	\$33,989	\$56,701
Customer Service Representative	159	\$16,640	\$30,226	\$53,664
Superintendent/Supervisor/Foreman	160	\$29,411	\$46,550	\$87,131
Certified Operator	396	\$20,134	\$36,825	\$59,134
Non-certified Field Personnel	338	\$17,493	\$29,320	\$57,845
	1,362			

Small Municipal Utilities (63)

(Less than 2,001 Connections)

ANNUAL SALARY RANGE

<u>Position</u>	<u>Count</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Manager/Superintendent/CEO	33	\$26,000	\$50,052	\$95,924
Assistant Mgr/Supt/CEO	9	\$23,272	\$38,184	\$68,727
Finance Director/Accountant	2	\$30,680	\$41,600	\$41,600
Engineer	-			
City Clerk/Office Manager	42	\$16,640	\$33,410	\$52,686
Assistant Clerk/Office Manager	19	\$24,960	\$30,283	\$37,740
Bookkeeper	8	\$16,640	\$29,997	\$43,000
Customer Service Representative	14	\$16,640	\$26,056	\$36,213
Superintendent/Supervisor/Foreman	34	\$30,389	\$40,590	\$53,061
Certified Operator	70	\$20,134	\$33,261	\$54,933
Non-certified Field Personnel	58	\$17,493	\$25,836	\$38,355
	288			

Medium Municipal Utilities (43)

(2,001 - 5,000 Connections)

ANNUAL SALARY RANGE

<u>Position</u>	<u>Count</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Manager/Superintendent/CEO	38	\$38,000	\$66,936	\$121,600
Assistant Mgr/Supt/CEO	8	\$27,976	\$48,661	\$74,542
Finance Director/Accountant	4	\$40,560	\$51,465	\$65,760
Engineer	-			
City Clerk/Office Manager	30	\$24,960	\$40,768	\$60,008
Assistant Clerk/Office Manager	12	\$21,840	\$32,294	\$41,974
Bookkeeper	15	\$22,880	\$36,761	\$56,701
Customer Service Representative	42	\$20,800	\$32,070	\$47,050
Superintendent/Supervisor/Foreman	42	\$30,867	\$46,087	\$66,955
Certified Operator	130	\$22,069	\$37,133	\$54,392
Non-certified Field Personnel	70	\$18,720	\$28,284	\$43,763
	391			

Large Utilities (30)

(Greater than 5,000 Connections)

ANNUAL SALARY RANGE

<u>Position</u>	<u>Count</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Manager/Superintendent/CEO	27	\$45,528	\$74,872	\$110,000
Assistant Mgr/Supt/CEO	16	\$36,920	\$59,428	\$88,425
Finance Director/Accountant	12	\$34,926	\$67,145	\$95,800
Engineer	7	\$74,048	\$82,076	\$111,537
City Clerk/Office Manager	20	\$35,000	\$47,911	\$74,152
Assistant Clerk/Office Manager	12	\$30,202	\$42,330	\$56,887
Bookkeeper	7	\$25,480	\$32,612	\$42,328
Customer Service Representative	99	\$18,720	\$30,032	\$53,664
Superintendent/Supervisor/Foreman	83	\$29,411	\$49,287	\$87,131
Certified Operator	193	\$22,880	\$37,909	\$59,134
Non-certified Field Personnel	207	\$18,720	\$30,646	\$57,845
	683			

All Water Districts, Water Associations, Water Commissions & Sanitation Districts (72)

ANNUAL SALARY RANGE

<u>Position</u>	<u>Count</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Manager/Superintendent/CEO	61	\$30,000	\$64,063	\$110,000
Assistant Mgr/Supt/CEO	13	\$23,272	\$50,033	\$88,425
Finance Director/Accountant	8	\$30,680	\$57,366	\$77,613
Engineer	-			
Office Manager	46	\$22,725	\$41,020	\$68,861
Assistant Office Manager	20	\$28,124	\$36,005	\$56,887
Bookkeeper	19	\$20,880	\$35,394	\$56,701
Customer Service Representative	94	\$18,720	\$30,142	\$53,664
Superintendent/Supervisor/Foreman	64	\$29,411	\$46,522	\$82,886
Certified Operator	166	\$23,920	\$37,348	\$59,845
Non-certified Field Personnel	143	\$17,680	\$30,244	\$57,845
	621			

Small Water Districts, Associations, Commissions & Sanitation Districts (20)

(Less than 2,001 Connections)

ANNUAL SALARY RANGE

<u>Position</u>	<u>Count</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Manager/Superintendent/CEO	12	\$30,000	\$48,693	\$95,924
Assistant Mgr/Supt/CEO	1		\$23,272	
Finance Director/Accountant	1		\$30,680	
Engineer	-			
Office Manager	11	\$22,725	\$33,124	\$45,760
Assistant Office Manager	3	\$30,680	\$31,269	\$31,928
Bookkeeper	4	\$20,880	\$30,400	\$43,000
Customer Service Representative	3	\$21,736	\$22,811	\$24,960
Superintendent/Supervisor/Foreman	8	\$31,200	\$41,996	\$48,709
Certified Operator	12	\$29,806	\$35,975	\$43,000
Non-certified Field Personnel	10	\$17,680	\$25,293	\$36,754
	65			

Medium Water Districts, Associations, Commissions & Sanitation Districts (31)

(2,001 - 5,000 Connections)

ANNUAL SALARY RANGE

<u>Position</u>	<u>Count</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Manager/Superintendent/CEO	28	\$38,000	\$65,223	\$110,000
Assistant Mgr/Supt/CEO	3	\$39,790	\$48,499	\$57,325
Finance Director/Accountant	1		\$49,005	
Engineer	-			
Office Manager	21	\$32,177	\$41,646	\$60,008
Assistant Office Manager	10	\$28,184	\$33,399	\$41,974
Bookkeeper	10	\$22,880	\$37,657	\$56,701
Customer Service Representative	29	\$22,277	\$33,017	\$47,050
Superintendent/Supervisor/Foreman	21	\$30,867	\$44,021	\$66,955
Certified Operator	77	\$27,310	\$38,429	\$54,392
Non-certified Field Personnel	35	\$20,800	\$29,739	\$43,763
	235			

Large Water Districts, Associations, Commissions & Sanitation Districts (21)

(Greater than 5,000 Connections)

ANNUAL SALARY RANGE

<u>Position</u>	<u>Count</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Manager/Superintendent/CEO	20	\$45,528	\$71,662	\$110,000
Assistant Mgr/Supt/CEO	9	\$36,920	\$53,518	\$88,425
Finance Director/Accountant	5	\$34,926	\$64,375	\$77,613
Engineer	-			
Office Manager	14	\$35,000	\$46,284	\$68,861
Assistant Office Manager	7	\$31,928	\$41,757	\$56,887
Bookkeeper	5	\$29,328	\$34,862	\$42,328
Customer Service Representative	58	\$18,720	\$29,083	\$53,664
Superintendent/Supervisor/Foreman	34	\$29,411	\$49,281	\$82,886
Certified Operator	74	\$23,920	\$36,445	\$59,134
Non-certified Field Personnel	95	\$20,800	\$30,950	\$57,845
	321			

All Municipal Utilities (64)

ANNUAL SALARY RANGE

<u>Position</u>	<u>Count</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Manager/Superintendent/CEO	38	\$26,000	\$62,449	\$121,600
Assistant Mgr/Supt/CEO	20	\$27,976	\$51,668	\$82,077
Finance Director/Accountant	11	\$40,560	\$62,029	\$95,800
Engineer	7	\$74,048	\$82,076	\$111,537
City Clerk/Office Manager	46	\$16,640	\$37,657	\$74,152
Assistant Clerk/Office Manager	22	\$21,840	\$33,459	\$51,480
Bookkeeper	11	\$16,640	\$31,563	\$56,701
Customer Service Representative	65	\$16,640	\$30,341	\$42,269
Superintendent/Supervisor/Foreman	96	\$30,389	\$46,569	\$87,131
Certified Operator	230	\$20,134	\$36,454	\$57,547
Non-certified Field Personnel	195	\$17,493	\$28,657	\$54,267
	741			

Small Municipal Utilities (43)

(Less than 2,001 Connections)

ANNUAL SALARY RANGE

<u>Position</u>	<u>Count</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Manager/Superintendent/CEO	21	\$26,000	\$50,828	\$89,498
Assistant Mgr/Supt/CEO	8	\$30,576	\$40,048	\$68,727
Finance Director/Accountant	1		\$41,600	
Engineer	-			
City Clerk/Office Manager	31	\$16,640	\$34,629	\$52,686
Assistant Clerk/Office Manager	15	\$24,960	\$31,126	\$37,740
Bookkeeper	4	\$16,640	\$29,593	\$35,173
Customer Service Representative	11	\$16,640	\$26,941	\$36,213
Superintendent/Supervisor/Foreman	26	\$30,389	\$40,157	\$53,061
Certified Operator	58	\$20,134	\$32,699	\$54,933
Non-certified Field Personnel	48	\$17,493	\$25,949	\$38,355
	223			

Medium Municipal Utilities (12)

(2,001 - 5,000 Connections)

ANNUAL SALARY RANGE

<u>Position</u>	<u>Count</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Manager/Superintendent/CEO	10	\$44,720	\$71,735	\$121,600
Assistant Mgr/Supt/CEO	5	\$27,976	\$48,758	\$74,542
Finance Director/Accountant	3	\$40,560	\$52,285	\$65,760
Engineer	-			
City Clerk/Office Manager	9	\$24,960	\$38,720	\$49,800
Assistant Clerk/Office Manager	2	\$21,840	\$26,770	\$31,700
Bookkeeper	5	\$27,560	\$34,968	\$41,392
Customer Service Representative	13	\$20,800	\$29,958	\$40,560
Superintendent/Supervisor/Foreman	21	\$37,040	\$48,153	\$59,088
Certified Operator	53	\$22,069	\$35,250	\$49,928
Non-certified Field Personnel	35	\$18,720	\$26,828	\$36,920
	156			

Large Municipal Utilities (9)

(Greater than 5,000 Connections)

ANNUAL SALARY RANGE

<u>Position</u>	<u>Count</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Manager/Superintendent/CEO	7	\$57,408	\$84,044	\$106,085
Assistant Mgr/Supt/CEO	7	\$54,538	\$67,027	\$82,077
Finance Director/Accountant	7	\$56,909	\$69,124	\$95,800
Engineer	7	\$74,048	\$82,076	\$111,537
City Clerk/Office Manager	6	\$37,440	\$51,706	\$74,152
Assistant Clerk/Office Manager	5	\$30,202	\$43,131	\$51,480
Bookkeeper	2	\$21,840	\$26,770	\$31,700
Customer Service Representative	41	\$20,800	\$31,375	\$42,269
Superintendent/Supervisor/Foreman	49	\$30,680	\$49,292	\$87,131
Certified Operator	119	\$22,880	\$38,820	\$57,547
Non-certified Field Personnel	112	\$18,720	\$30,389	\$54,267
	362			

Employee Benefits Summary 2017 Survey

All Utilities (140)	
Health Insurance	88%
Life Insurance	68%
Retirement	83%
Vacation	95%
Sick Leave	90%
Incentive Pay	15%

Utilities 0 to 2000 Connections (69)	
Health Insurance	75%
Life Insurance	47%
Retirement	68%
Vacation	91%
Sick Leave	85%
Incentive Pay	12%

Utilities 2001 to 5000 Connections (40)	
Health Insurance	100%
Life Insurance	80%
Retirement	95%
Vacation	98%
Sick Leave	95%
Incentive Pay	13%

Large Utilities Over 5000 Connections (31)	
Health Insurance	100%
Life Insurance	97%
Retirement	100%
Vacation	100%
Sick Leave	94%
Incentive Pay	26%

NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS
1102 INTERSTATE COMMERCE COMMISSION BUILDING
CONSTITUTION AVENUE AND TWELFTH STREET, N.W.
POST OFFICE BOX 684, WASHINGTON, D.C. 20044
TELEPHONE (202) 628-7324

DEPRECIATION PRACTICES
FOR SMALL WATER UTILITIES

AUGUST 15, 1979



RECEIVED

AUG 2 1979

FILE



TABLE OF CONTENTS

	Page
Foreword	iii
Depreciation Subcommittee	iv
Staff Committee on Engineering	v
Committee on Engineering	v
Resolution Re Adoption of Depreciation Practices for Small Water Utilities	v
Purpose	1
Scope	1
Objectives of Depreciation	2
Base for Depreciation Charges	2
Average Service Life Estimates	3
Chart I - A Survivor Curve and Related Curves	8
Figure 1. Typical Average Service Lives, Salvage Rates, and Depreciation Rates	11
Net Salvage Estimate	12
Figure 2. Determination of Net Salvage Value Pumping Equipment	13
Figure 3. Average and Future Net Salvage Pumping Equipment	14
Weighting	15
Figure 4. Weighted Average Service Life Pumping Equipment	15
Figure 5. Weighted Net Salvage Value Pumping Equipment	16
Theoretical Reserve Studies	17
Federal Income Tax Depreciation	19
Depreciation Rate Calculations	23
Determination of Annual Depreciation Accrual	24

Figure 6. Summary of Annual Depreciation Rate Determination Straight-Line Average Service Life Method	25
Recording the Depreciation Accrual	26
Depreciation Accounting	27
Figure 7. Depreciation Accounting	27
Reasonableness of Final Report	28
Appendix A - Determination of Straight-Line Remaining Life Depreciation Accruals	29
General	29
Depreciation Rate Equation	30
Determination of Annual Depreciation Accrual	30
Table I - Summary of Annual Depreciation Rate Determination Straight- Line Remaining Life Method	33
Appendix B - Depreciation Study by Forecast or Life Span Method	34
Footnotes	35
Appendix C - Realized Life and Remaining Life of Plant Computed from Accounting Records	37
Appendix D - Range of Depreciation Reserve for Average Realized Life	38
Appendix E - Asset Guideline Classes and Periods, Asset Depreciation Ranges, Annual Asset Guideline Repair Allowance Percentage	39
Index	40

FOREWORD

To the National Association of Regulatory Utility Commissioners.

In December 1968, a manual entitled "Public Utility Depreciation Practices" was prepared by the Subcommittee on Depreciation, wherein many of the techniques used to determine service lives of depreciable property and depreciation rates were discussed. It was the observation of the Depreciation Subcommittee as well as that of some other state commissions that this manual was too complicated and too time-consuming to be of use to state commissions dealing with small utilities. It was felt that the Subcommittee should prepare a manual that could be used by state commissions dealing with small utilities having a limited amount of records and know-how. In December 1974, a manual entitled "Depreciation Practices for Small Telephone Utilities" was completed. The second of such manuals, for small water utilities, is presented herein and is intended to assist the state commissions in establishing depreciation rates for small water utilities. From an analysis of reports issued by state commissions, the majority of small water utilities generally have less than 200 customers and \$50,000 of annual revenue. The Subcommittee analyzed data from various states and water utilities from which it selected typical average service lives and net salvages by plant accounts. It was assumed that the small water utilities use the same construction techniques, have similar

equipment, maintenance standards and accounting practices as those in the selected sample; therefore, the small water utility average service lives and depreciation rates would be similar to those used by the average water utility.

The manual should allow the staffs of the state commissions to establish reasonable depreciation rates for small water companies and test the reasonableness thereof.

Many state commissions have established their own practices which may differ somewhat from those proposed herein. It is not suggested that this manual replace those practices.

The Subcommittee on Depreciation is continuing its work on depreciation practices for small gas and electric utilities and, in addition thereto, is continuing its work in the preparation of a manual of definitions used in depreciation work.

The members of the Subcommittee on Depreciation working on these practices were:

DEPRECIATION SUBCOMMITTEE

Ray J. Nery, North Carolina, Chairman

E.C. Hostettler, ICC
Daniel C. McLean, Washington
Robert G. Warnek, FCC
Alfred E. Teberroth, Michigan
Larry Hoaglan, Arkansas

James R. Safford, New York
F.W. Bone, IRS
Martin Abramson, California
Norman Deutsch, FERC
Walter D'Haeseleer, Florida

This manual was recommended to the National Association of Regulatory Utility Commissioners by the Committee on Engineering and its Staff Committee. The text of the resolution adopting the manual is stated below. The members of these committees are as follows:

STAFF SUBCOMMITTEE ON ENGINEERING

Henry A. Minch, Maryland, Chairman

Robert G. Warnek, FCC
William J. Ide, Illinois
Ray J. Nery, North Carolina
Harold C. Blatt, Pennsylvania
Richard Bibb, Tennessee
Lester Stuzin, New York PSC
David C. Lathom, FERC
William F. Fox, Ohio

Russell N. Staley, Alaska PUC
Robert J. Buckley, Iowa SCC
Bruno A. Davis, California
Joseph W. Ferraro, Sr., New York
Joseph M. Flanigan, REA, Observer
Ray L. Pruett, Utah
Walter D'Haeseleer, Florida
Kevin Kelly, NRRI, Observer

COMMITTEE ON ENGINEERING

Robert K. Koger, North Carolina, Chairman

Heber P. Hardy, Nevada
Gordon J. Zerbetz, Alaska PUC
Z. D. Atkins, Tennessee
Robert C. Downie, Arkansas PSC

Alfred H. Reichman, Illinois
James M. Plaskett, Indiana
Thomas J. Schneider, Montana
Roger L. Hanson, Minnesota PSC

Resolution Re Adoption of Depreciation
Practices for Small Water Utilities

WHEREAS, The Committee on Engineering of this Association and its Subcommittee on Depreciation, after extended study and conferences, have developed Depreciation Practices for Small Water Utilities; and

WHEREAS, The Committee on Engineering of this Association has recommended the manual for adoption by this Association; and

WHEREAS, This Association believes that the Depreciation Practices for Small Water Utilities will be of value in assisting regulatory agencies in the practical solution of depreciation problems; now, therefore, be it

RESOLVED, That the Executive Committee of the National Association of Regulatory Utility Commissioners hereby adopts the Depreciation Practices for Small Water Utilities reported by the Committee on Engineering and authorizes its Washington Staff to make it available to the member regulatory agencies of the Association and others as a guide for the practical assistance and guidance to regulatory personnel and others regarding depreciation for small water utilities.

Adopted August 13, 1979

DEPRECIATION PRACTICES
FOR SMALL WATER UTILITIES

Purpose

The purpose of this manual is to present in a simplified manner the essential information and procedures recommended for estimating the service lives, net salvages and depreciation rates for the plant of small water utilities.

It is hoped that the practices developed in this manual will establish a basis for uniformity and be sufficiently clear to enable the staffs of regulatory commissions to prepare reasonable schedules of depreciation rates and amounts of annual depreciation accruals.

For a more complete discussion on the subject of depreciation practices or for a more detailed analysis of specific depreciation procedures, refer to "Public Utility Depreciation Practices" published in 1968 by the National Association of Regulatory Utility Commissioners, 1102 ICC Building, Post Office Box 684, Washington, D.C. 20044.

Scope

The scope of this manual includes the reasons for depreciation, the straight-line methods used to compute annual depreciation rates, an explanation of the factors used in the depreciation accrual equations, definitions of depreciation terms, some accounting transactions related to depreciation and suggested average service lives, net salvages and depreciation rates for most categories of water utility plant.

The straight-line average service life method of computing the annual depreciation rates used by most regulatory agencies has been developed and used in the text of this manual. The straight-line remaining life method used by some regulatory agencies has been developed and included as Appendix A.

A small water utility is defined for the purpose of this report as a water utility with plant investment of less than \$1,000,000. The simplified and less detailed practices in this manual are designed to meet the needs of regulatory commissions to establish realistic depreciation rates for such utilities.

Objectives of Depreciation

The principal objective of recognizing depreciation as a cost of service is to allow the utility to recover the cost of the depreciable investment, less estimated net salvage, over the useful life of the depreciable plant by means of an equitable plan of charges to operating expenses or clearing accounts. The straight-line average service life method presented in this manual meets this objective.

Base for Depreciation Charges

The depreciation base used in this manual is the original cost of the depreciable property. Original cost is defined as the cost to the person who first devotes the property to public service. The base recoverable through depreciation is limited to cost of the depreciable parts of the property. This generally excludes the cost of organizing, franchises, intangible plant and land.¹ The base can usually be determined from actual construction costs recorded on the utility's books.

Actual construction costs include the cost of the labor, equipment and materials needed to construct the plant, the capitalized interest during construction, administrative and general expenditures such as engineering and supervision, general officers' and clerical salaries and expenses, office supplies and expenses, legal expenditures and other expenses covering injuries and damages, insurance, interest, and taxes. Care must be exercised in spreading these administrative and general expenses between the depreciable and nondepreciable plant such as land. While meticulous distinctions are impossible, reasonably accurate assignments or spreads can be obtained by the utilization of good accounting practices.

¹ Some jurisdiction may exclude contributions from the depreciable base.

Average Service Life Estimates

Determination of service lives basically involves an analysis of the past and engineering estimates of the future effect of wear and tear, decay, action of the elements, inadequacy, obsolescence and public requirements. In some cases, other factors such as anticipated changeover to new or improved kinds of plant, or specific plans of management must be given consideration. To arrive at a satisfactory estimate of future conditions, past experience generally gives an indication which can be used as at least one element in the estimate. The weight to be given to past experience depends upon the extent to which the conditions affecting service life in the future are expected to be similar or different from those in the past.

Utility property, in conformance with a uniform system of accounts, is classified broadly by function and each function is broken down into accounts. As an example, one function of a water utility is providing transmission and distribution services. The plant providing that function is divided into several accounts such as transmission and distribution mains, fire mains, services, meters, hydrants, and so on. Each account is further divided into subaccounts, groups, and units. Each unit is an individual item of plant, but it is common practice to combine units which have like mortality characteristics, like physical appearance and character and which operate under the same general conditions into one group. There may be one or more

groups within an account. For instance, in the "transmission and distribution mains" account, the units (individual items) of cast iron, steel and asbestos-cement pipe over 12 inches in diameter may constitute one group, units of pipe from 12 to eight inches in diameter may constitute the second group, and the third group might include all pipe smaller than eight inches in diameter. Because of greater simplicity in maintaining records, the group basis is more feasible for most classes of utility property where a large number of units are involved and is the more generally used base among electric, gas, telephone, and water utilities.

In the above example, the average service life of a group containing cast iron, steel, and asbestos-cement pipe would be based on a composite or weighted average of the service lives of all units within the group. When a group such as described above contains units or items of plant with varying estimated average service lives, the average service life of the group is the reciprocal average of the lives as shown under the subject of "weighting" in this manual.

In utility accounting, the depreciation rate is applied to depreciable plant in service. Therefore, the surviving plant is of more interest than the retired plant, and the retirement curve is seldom used. The survivor curve shows the percent of original plant surviving by year.

A reliable method of estimating the average service life of a unit or group is to use the survivor curve method.

Underlying this method are certain statistical concepts which require some explanation. In estimating service life, we are concerned with the span of years from the placement of plant to its retirement. In groups of property seldom do all units reach retirement at the same time. Some will reach it at an early age, many will bunch around a period somewhere near the average and a few will extend out to a long age. The statistician would say we have a number of events (retirements) occurring with different values (ages) which can be illustrated by a graph known as a frequency curve. The frequency curve shows the retirements, as a percentage of the group, occurring in each year of the group's life. From either the frequency curve or survival and retirement ratios, the survivor curves can be developed. The average life or average age at which retirements occur can also be developed from the frequency curve.

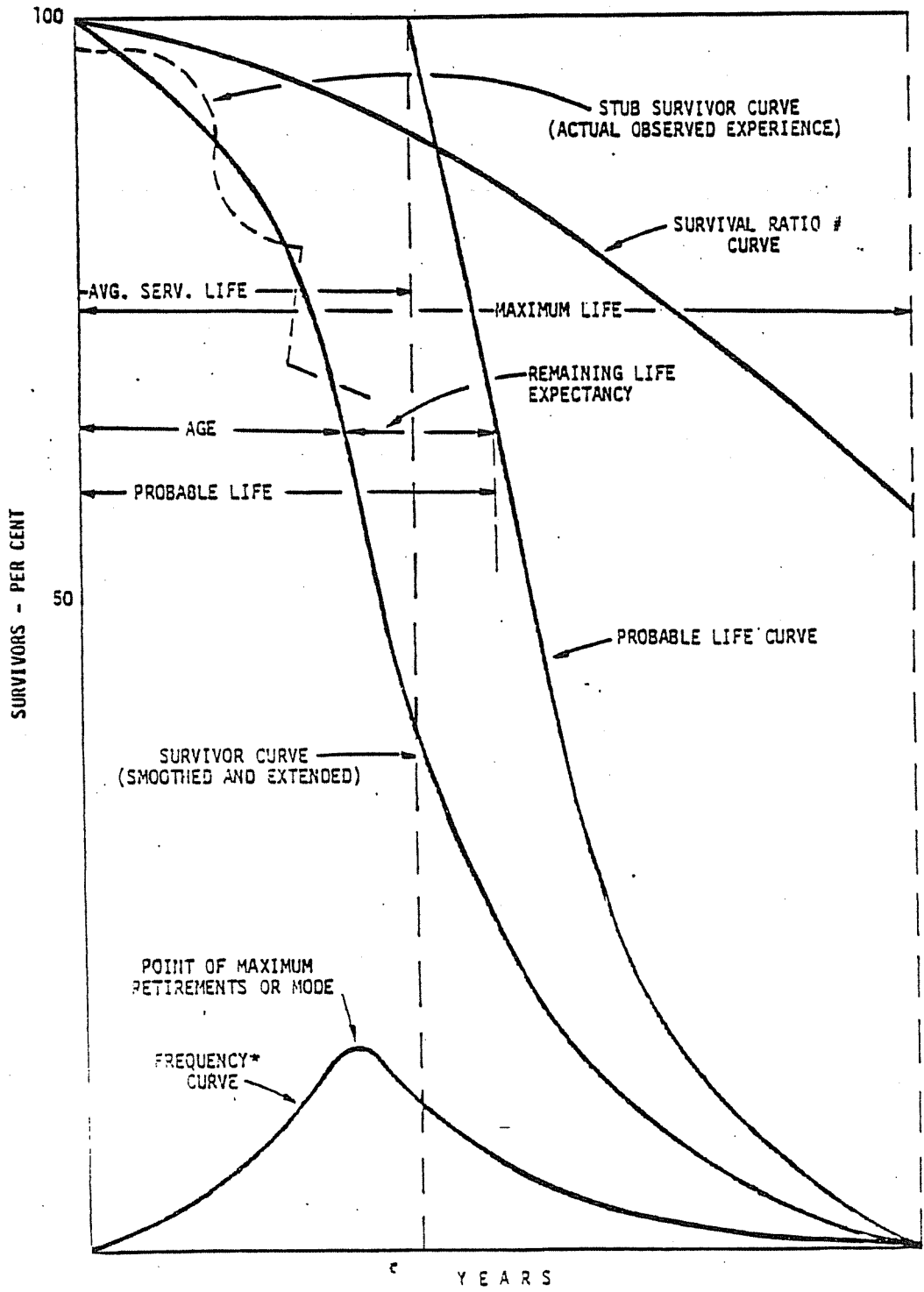
The probable life is the expected life of the survivors, or plant in service, at any given age. At any age after retirements have started, the probable life is longer than the average life because the short-lived units have been removed from the surviving group.

Using the survivor curve method, the remaining life of a group of depreciable property of any age can be determined by finding that age on the survivor curve and projecting horizontally to the probable life curve. The difference in years between the age and probable life is the remaining life. Typical survivor and related curves are shown on

Chart I.

The use of survivor curves developed from good mortality records by actuarial methods is considered to be an accurate and reliable method to determine the estimated average service life of depreciable property. One widely accepted study of survivor curves (Iowa Curves) is that conducted at the Iowa State College of Engineering Experiment Station as described in their Bulletin Nos. 125 and 155.

CHART I
A SURVIVOR CURVE AND RELATED CURVES



* THE FREQUENCY CURVE IS NOT REQUIRED IN THE USUAL DEPRECIATION COMPUTATIONS.
 † THE SURVIVAL RATIOS (SURVIVORS AT END OF PERIOD ÷ PLANT EXPOSED AT BEGINNING OF PERIOD) ARE USED IN COMPUTING THE SURVIVOR CURVE.

A small utility may not have sufficient records to develop its own survivor curves. This problem can be resolved by using survivor curves of comparable plant that have been developed by others, by selecting an average service life based on engineering judgment, or by using the forecast or life span method currently being used by other utilities throughout the country.

The forecast or life span method is basically an assumption that a given piece of property will be retired in a specific number of years after placement or that the actual date of retirement will be a certain date. At the final date of retirement of properties, all units comprising the piece of property including interim additions are retired at once. This is in contrast to group properties in which retirement of units occurs gradually until all are retired. The forecast method is basically the simplest method of computing depreciation and, theoretically, could be applied to each unit of property. Rather than using this method for group properties, it is generally used for comparatively large, easily identifiable pieces of property such as buildings, treatment plants, dams, and reservoirs. Appendix B shows an example of this method.

Where lack of appropriate data prevents the application of any of the two previous methods, engineering judgment estimates of service life expectancies may be appropriate. In developing these life expectancies, it is helpful to study possible ranges of life estimates setting down

reasonable minimum and maximum expectancies before coming to final conclusions. As previously indicated under the survivor curve discussion, it should be noted that the average life of all units originally placed in the group is less than the probable life of surviving units because of the prior retirement of short-lived units.

Without the benefits of mortality data or definitive retirements dates for particular pieces of property, it will be very difficult for staffs of regulatory commissions and small water utilities to make a proper estimate of average service life for each group or unit of plant. For that reason, a range of average service lives currently being used by water utilities throughout the country for water facilities designed and installed and maintained in accordance with good water works practice is shown below in Figure 1.

FIGURE 1
Typical Average Service Lives,
Salvage Rates, and Depreciation Rates
Small Water Utilities

NARUC Account Number	Class of Plant	Average Service Life ^{a/} Years	Net Salvage Percent	Depreciation Rate Percent
<u>Source of Supply Plant</u>				
311	Structures and Improvements	35-40		2.9-2.5
312	Collecting & Impounding Reservoirs	50-75		2.0-1.3
313	Lake, River and Other Intakes	35-45		2.9-2.2
314	Wells and Springs	25-35		4.0-2.9
315	Galleries and Tunnels	25-50		4.0-2.0
316	Supply Mains	50-75		2.0-1.3
317	Other Source of Water Supply Plant	30-40		3.3-2.5
<u>Pumping Plant</u>				
321	Structures and Improvements	35-40		2.9-2.5
324-7	Pumping Equipment	20		5.0
328	Other Pumping Plant	25		4.0
<u>Water Treatment Plant</u>				
331	Structures and Improvements	35-40		2.9-2.5
332	Water Treatment Equipment	20-35		5.0-2.9
<u>Transmission and Distribution Plant</u>				
341	Structures and Improvements	35-40		2.9-2.5
342	Reservoirs and Tanks	30-60		3.3-1.7
343	Transmission and Distribution Mains	50-75		2.0-1.3
344	Fire Mains	50-75		2.0-1.3
345	Services	30-50		3.3-2.0
346	Meters	35-45	10	2.6-2.0
347	Meter Installations	40-50		2.5-2.0
348	Hydrants	40-60	5	2.4-1.6
<u>General Plant</u>				
390	Structures & Improvements	35-40		2.9-2.5
391	Office Furniture and Equipment	20-25	5	4.8-3.8
392	Transportation Equipment	7	10	12.9
393	Stores Equipment	20		5.0
394	Tools, Shop & Garage Equipment	15-20	5	6.3-4
395	Laboratory Equipment	15-20		6.7-5.5
396	Power Operated Equipment	10-15	10	9.0-6.0
397	Communication Equipment	10	10	9.0

a/ These lives are intended as a guide; longer or shorter lives should be used where conditions warrant.

Net Salvage Estimate

Estimated net salvage is the estimated gross salvage in cash or value which is expected to be realized from utility property retired less the estimated cost of removal involved in retiring such property. The estimated net salvage can be a negative figure in instances where the cost of removal is expected to exceed any gross salvage value. Net salvage is usually expressed as a percentage of the plant retired.

Reasonable salvage estimates and forecasts for small water utilities can be made by trending the net salvage experience and applying engineering judgment. Some of the factors to be considered in developing an estimated salvage percentage are:

- (a) Utility's recorded experience, including trends with the same or similar type property;
- (b) Effect on recorded salvage of transfers, sales and reimbursements from damages or forced relocations;
- (c) Future conditions affecting cost of removal; and
- (d) Changes in accounting practices that have affected salvage and cost of removal amounts.

Where records are available, recorded or past salvage experience for each account may be determined by analyzing the debits and credits to the reserve for depreciation. The retirements should be summarized for each year and the totals of gross salvage and cost of removal determined. Dividing each of the latter by the retirements gives the percent gross salvage and percent cost of removal realized each year. This type of calculation for a series of years

is illustrated in the following table.

FIGURE 2
Determination of Net Salvage Value
Pumping Equipment

Year	Plant Retired a	Gross Salvage		Cost of Removal		Net Salvage	
		Amount b	% of Retirement c=b÷a	Amount d	% of Retirement e=d÷a	Amount f=b-d	% of Retirement g=f÷a
1973	\$ 50	\$12	24.0%	\$ 3	6.0%	\$ 9	18.0%
1972	100	22	22.0	7	7.0	15	15.0
1971	70	11	15.7	5	7.1	6	8.5
1970	40	5	12.5	4	10.0	1	2.5
1969	30	7	23.3	5	16.7	2	6.7
1968	30	5	16.7	2	6.7	3	10.0
1967	50	2	4.0	7	14.0	-5	-10.0
Totals	\$370	\$64	17.3%	\$33	8.9%	\$31	8.4%

The above tabulation shows that the past recorded net salvage value amounted to 8.4% of the cost of plant retired.

In the use of the straight-line average service life method for computing depreciation rates, an estimated net salvage covering the entire life of the unit or group of property is needed. The utility must estimate salvage values for property that will retire many years in the future. In doing so, it should be remembered that with most depreciable property the percent gross salvage realized on retirement varies with the age of the unit. Past experience is usually based on only a few retirements, probably of shorter-lived units. Generally, the older units yield lower values. The decrease in gross salvage with age may be approximated by assuming a straight-line diminution from

realized gross salvage of early retirements to the predicted ultimate gross salvage of oldest-lived units. A sample calculation of estimated net salvage values, using recorded values developed in the preceding tabulation and judgment values based on anticipated future conditions, is shown below.

FIGURE 3
Average and Future Net Salvage
Pumping Equipment

Factors	% of Retmt.	Amt. of Retmt.	Source of Data
A. Gross Salvage Past Retirements	17.3%	\$ 370	Preceding tabulation
B. Gross Salvage Last Survivors	5.0		Selected by judgment
C. Gross Salvage Future Avg. = $\frac{A+B}{2}$	11.2	3,755	Plant presently in service
D. Average Gross Salvage	11.7		(17.3x370+11.2x3755)+(370+3755)
E. Cost of Removal Past Retirement	8.9		Preceding tabulation
F. Cost of Removal Future Retmt.	11.0		Selected by judgment
G. Average Cost of Removal	10.8		(8.9x370+11.0x3755)+(370+3755)
H. Future Net Salvage	0.2		C-F
I. Average Net Salvage	0.9		D-G

Where records are not available, management and engineering judgments must be made and comparisons with other utilities operating under similar conditions can often be made to develop reasonable estimated net salvage values. For a thorough discussion on estimating net salvage, the reader is referred to Chapter 8 of "Public Utility Depreciation Practices" published by the National Association of Regulatory Utility Commissioners, copyright 1968.

Weighting

Accounts frequently include more than one unit or group of depreciable utility property with different average service lives. To avoid the detailed work of calculating the accrual for each unit or group within an account, an average service life or a composite average service life should be obtained for each account. Reciprocal weighting should always be used in computing an average service life for an account or class of plant comprised of several groups. Only reciprocal weighting will derive the same total as if accruals were developed for each unit or group.

An example of reciprocal weighting to establish a composite average service life is shown in the following tabulation:

FIGURE 4

Weighted Average Service Life
Pumping Equipment

Group (a)	Gross Plant Investment (b)	Average Service Life (c)	Reciprocal Weighting $\frac{b}{c}$ (d)
1	\$1,500	30.0 years	50 \$/year
2	1,255	20.0	63
3	1,000	27.0	37
	\$3,755	25.0 years	150 \$/year

The weighting in column (d) is obtained by dividing the plant dollars in column (b) by the average service life in column (c) of every category to be weighted. A weighted

average service life of 25.0 years is obtained by dividing the sum of column (b) by the sum of column (d).

In certain accounts as in the transmission and distribution mains account where the total account consists of several groups of pipe with each group having a different average service life and where the units constituting the group have different physical qualities and average service lives, it may be necessary to weight the units within each group first and then weight the groups to develop a composite or weighted average for the entire account.

Weighting can also be applied to develop a composite salvage for a group or an account. The following tabulation is an example:

FIGURE 5

Weighted Net Salvage Value
Pumping Equipment

Group	Gross Plant Investment	Average Service Life	Life Weight	Net Salvage Percent	Salvage Weight
a	b	c	d=b+c	e	f=dxe
1	\$1,500	30.0 years	50 \$/year	8.0%	400% \$/year
2	1,255	20.0	63	10.0	630
3	1,000	27.0	37	12.7	470
	\$3,755	25.0 years	150 \$/year	10.0%	1,500% \$/year

The weighting of the net salvage values of the above three groups resulted in a weighted net salvage value of 10.0%. The total of column (f) was divided by the total of column (d) to obtain the weighted value of net salvage.

Theoretical Reserve Studies

A theoretical depreciation reserve is defined as that amount which together with the estimated future depreciation accruals will equal the original cost of the property less net salvage. Studies to determine this theoretical amount may be used for several purposes.

Certain jurisdictions may use the theoretical reserve for rate-making purposes where no reasonable actual reserve is available or for computing fair value in some fair value jurisdictions. It may also be used to allocate the total book reserve to individual account, plant categories or areas.

In making such studies, it is best to separate short-lived plant such as motor vehicles from the longer-lived water plant to be sure that the plant is fully accrued at the time of replacement. The prices, the dates of purchase, the expected dates of disposal, and the expected allowances at trade-in will usually be readily available for these short-lived facilities. With this data, the amount that should be in the reserve can be quickly determined.

The degree of merit and value of a theoretical depreciation reserve study are discussed in the manual,

"Public Utility Depreciation Practices," published in 1968 by the NARUC. To use its suggested procedures for the calculation of a theoretical reserve, the manual assumes that the depreciation analyst has sufficient historical data on which to base a judgment on such things as mortality dispersion, average service life, and net salvage. However, such data is seldom available for a small water utility.

When adequate records are not available, a single theoretical reserve should not be selected on an arbitrary or convenient basis. Rather, it must be based on reasonable assumptions for service life, retirement dispersion, and salvage.

For the company that has periodic additions and retirements, no matter how large or small, a theoretical reserve percentage can be determined by assuming a certain dispersion of retirements, by estimating the average service life and by determining the average realized life of the plant. The average realized life is different from the average age in that it includes not only the ages of presently existing plant but also those for past retirements. An example of the determination of average realized life is presented in Appendix C.

The example assumes an average service life of 35 years and develops a realized life of 10.45 years. Interpolating between 10 and 11 years in Appendix D, the reserves would be 24.8% to 29.9% for a 30-year life and 16.9% to 21.9% for a 45-year life. Interpolating between these two sets of

figures, a range of 22.2% to 27.2% is obtained for a 35-year service life.

Federal Income Tax Depreciation

Under section 167 of the Internal Revenue Code 1954, the general rule for depreciation for Federal income tax purposes is that there shall be allowed as a depreciation deduction a reasonable allowance for exhaustion and wear and tear (including a reasonable allowance for obsolescence) of property used in a trade or business or held for the production of income.

Accelerated methods of depreciation are provided by the 1954 Code, as well as the straight-line method most commonly used prior to 1954. In 1962, Rev. Proc. 62-21, 1962-2 C.B. 418, supplanted Bulletin F, old guidelines used for many years by taxpayers and the Internal Revenue Service in arriving at useful lives for depreciable property. Rev. Proc. 62-21 established guideline rules and lives for various classes of depreciable properties and generally liberalized depreciation deductions for income tax purposes. Although water utilities were not materially affected, some advantage was gained by the establishment of one guideline life for depreciable assets of water utilities except in the area of specific depreciable assets used in all business activities.

In 1971 an elective Asset Depreciation Range (ADR) system revoked Rev. Proc. 62-21 guidelines, including subsequent

supplements and amendments thereto, for taxable years ending after December 31, 1970. The new elective system established vintage accounts (closed-end depreciation accounts containing eligible property to which a taxpayer elects to apply the ACR system) with an asset depreciation range in years (a lower limit, an asset guideline period, and upper limit) for each class of depreciable assets acquired after December 31, 1970. This system was modified by section 167 (m) of the 1954 Code in the Revenue Act of 1971 to include assets acquired both before January 1, 1971, and after December 31, 1970. For depreciable assets acquired before January 1, 1971, the system is called the Class Life (CL) system; for depreciable assets acquired after December 31, 1970, the system is called the Class Life Asset Depreciation Range (CLADR) system. The two systems are similar but they apply to depreciable assets differently; e.g., there is no range of years applicable to assets acquired prior to January 1, 1971. The asset guideline period is used instead. Section 1.167(a)-1 of Income Tax Regulations applies to assets acquired after December 31, 1970, and section 1.167(a)-2 applies to assets acquired before January 1, 1971.

To use the CLADR system, additions and retirements must be to and from vintage accounts, and gross salvage credited to the vintage account reserves, with removal costs charged to expense on retirement. Either gross or net salvage may be used for the CL system, but for tax purposes, some water companies have asked and received permission to change to

gross salvage accounting to be consistent with the CLADR system. The cost of reinstalling depreciable assets that are not retired but merely relocated is treated as part of the repair allowance unless the permissible repair allowance is exceeded, in which case the excess is capitalized in a special vintage account.

In Appendix E is a summary of some of the asset guideline classes, periods, ranges, and repair allowances provided by Rev. Proc. 77-10, 1977-1 C.B. 548, updating Rev. Proc. 72-10, 1972-1 C.B. 721, that may be used by water companies.

Prior to the CLADR and CL systems estimated salvage was generally considered as either a reduction of the amount subject to depreciation (basis) or by a reduction in the rate of depreciation (rate). Under these two systems basis or rates are not affected, but salvage is not disregarded. Depreciation can only be claimed until the adjusted basis equals estimated salvage value. For water utilities class 49.3, the maximum rate would be $100 \div 40 = 2 \frac{1}{2}\%$. Under section 167 of the Code when depreciable property is placed in service, estimated salvage can be reduced by 10%. For example, if salvage is reasonably estimated at 5% it can be reduced to zero, if 25%, it can be reduced to 15%, and depreciation may be claimed for the full cost in the first instance and 85% of the cost in the second instance.

Both the CLADR and CL systems are elective each taxable year; however, under CLADR, the system must be applied to vintage accounts until all the assets in the vintage

accounts are retired. If one of these systems is not elected, taxpayers must demonstrate the useful life used and follow the prior rules under section 167 of the Code with the exception that Rev. Proc. 62-21 and Bulletin F guidelines are no longer applicable.

If the CLADR system is elected, the annual asset guideline repair allowance percentage which applies to both CLADR and CL property may also be elected (see last column in Appendix E). Sufficient books and records must be kept for expenditures incurred for both CLADR and CL assets. Under the repair allowance election, expenditures for repairs, maintenance, rehabilitation or improvement of "repair allowance property" (investments subject to depreciation) that are not clearly capital expenditures are treated as deductible repairs to the extent that they do not exceed the repair allowance percentage of the repair allowance property. The excess, if any, is capitalized in a special vintage account as a property improvement in that class.

These newer income tax procedures for depreciation have only been briefly described, because they are complicated; but even with the complications, most utility companies that were opposed to the maintenance of continuing property records have adopted the CLADR and CL systems which generally require the maintenance of records in greater detail than that of regulatory authorities. With the consideration of added tax incentive there is a general tendency toward greater detail rather than lesser in most

phases of utility operations, and, therefore, it would seem to be desirable for utilities to establish a system of continuing property records.

Depreciation Rate Calculations

To compute the annual depreciation rate for the straight-line average service life method, the basic equation is:

$$d = \frac{100-c}{L}$$

Where:

- d = Depreciation rate in percent.
- c = Estimated average net salvage percentage.
- L = Estimated average service life.

Items c and L require estimates based on both experiences of the past and judgments of future conditions.

The values for service life and salvage components used in the above formula are the weighted average values for all of the plant in each of the accounting classifications. Weighted average values were discussed previously in this manual.

In actual practice, not only is a depreciation rate in percent desired but also a depreciation accrual in dollars. For the straight-line method, the equation is:

$$D = \frac{B-C}{L} \text{ or } \left(\frac{100-c}{100L} \right) \times B$$

where D is the depreciation accrual in dollars, C is the

estimated average net salvage in dollars and B is the book cost of gross depreciable plant in dollars.

The composite annual depreciation accrual rate is the ratio of the sum of the depreciation accrued from all depreciable accounts to the gross depreciable plant in the same year. Expressed as a percentage, the equation for the composite or total annual accrual depreciation rate is:

$$d = \% \text{ Rate} = \frac{\text{Annual Accrual}}{\text{Gross Depreciable Plant}} \times 100 = \frac{D}{B} \times 100$$

Determination of Annual Depreciation Accrual

The form for calculating annual depreciation accruals and rates by the average service life method is shown with sample calculations in Figure 6 below.

FIGURE 6

Company _____
Area/Dept. _____

Summary of Annual Depreciation Rate Determination
Straight-line Average Service Life Method

Year _____

NARUC Account Number	Description Plant	Gross Depreciable Plant	Average Service Life Years	Net Salvage Percent	Depr. Rate Percent	Annual Accrual
		1	2	3	4	5
311	Structures & Improv.	\$ 3,014	40		2.5	\$ 75
314	Wells	11,290	30		3.3	373
324	Pumping Equip. ^{1/}	3,755	25	10	3.6	135
342	Reservoirs & Tanks	8,628	50		2.0	173
343	Trans. & Distr. Mains	53,550	60		1.7	0
345	Services	9,452	40		2.5	236
346	Meters	6,038	40	12	2.2	133
348	Hydrants	995	50		2.0	20
391	Off. Furniture & Equip.	1,721	15	5	6.3	108
392	Transportation Equip.	6,290	6	15	14.2	395
	Total	\$104,733			2.9 ^{2/}	\$3,056

^{1/} Derivation of Columns 4 & 5

$$\text{Col. 4 (Depr. Rate)} = \left(\frac{100-10}{100 \times 25} \right) \times 100 = 3.6\%$$

$$\text{Col. 5 (Annual Accr.)} = \$3,755 \times 3.6\% = \$135$$

^{2/} Composite Rate of 2.9% is derived by dividing the sum of Column 5 by the sum of Column 1 and multiplying the product by 100.
 $\$3,056 \div \$104,733 = 0.029 \times 100 = 2.9\%$

The first two unnumbered columns on the form are for the listing of an appropriate plant account number and its corresponding description. Column (1) shows the dollar amount of gross depreciable plant in each account of the utility's books at the beginning of the year. This is element B in the accrual equation.

Columns (2) and (3) are provided for the two elements in the depreciation accrual calculation which must be estimated. These are the average service lives to be assigned to a property and the percentage of average net salvage which can be expected when the property is retired.

For the average service life method, column (4) shows the depreciation rate for each account. This rate is derived from the estimates of average service lives and salvage percentages to be shown in columns (2) and (3). The annual accrual for each account to be entered in column (5) is calculated by multiplying plant dollars in column (1) by the depreciation rate in column (4).

Recording the Depreciation Accrual

There are several methods which can be used in calculating the annual accrual to be recorded on the utility's books for the year. The simplest is to apply the predetermined annual depreciation rates to the beginning-of-year depreciable plant. Another method is to estimate the end-of-year plant and then apply the depreciation rates to the average of the beginning- and end-of-year plant. The last method requires

an adjustment to be made to the annual accrual after the recorded end-of-year plant amounts become available. In either method the utility may record the annual accrual as a single amount or in 12 monthly entries at its discretion or at the discretion of the regulatory commission. A third method employed by some of the larger utilities is to apply the annual depreciation rates each month to that month's beginning-of-month plant account balances or average monthly balances and record 1/12 of the result as that month's accrual.

Depreciation Accounting

Reference should be made to an appropriate system of accounts and instructions for complete details of accounting transactions. The following tabulation presents some of the essential transactions in a double entry set of records:

FIGURE 7

Depreciation Accounting		
Transaction	Debit	Credit
Original cost on placing plant in service	Plant account (asset account)	Cash, materials and supplies
Depreciation accruals	Operation expenses and clearing accounts	Deprecation reserve account
Retirement of original cost of plant	Depreciation reserve account	Plant account (reduces the asset balance)
Cost of removal on retirement from service	Depreciation reserve account	Cash, or accounts payable
Gross salvage on retirement from service	Cash, materials and supplies or other investment accounts receivable	Depreciation reserve account

The accounting for additions and retirements should be promptly and properly recorded at the time of installation or retirement so that the plant and reserve accounts at all times reflect the current conditions.

Reasonableness of Final Report

An overall test of reasonableness should be applied to the final determination of the annual accrual. The overall composite depreciation rate produced by the accrual calculation should normally fall within a range of from 2.0% to 4.0%. When results are obtained which fall significantly outside this range, further review should be made to ascertain the nature of any special conditions which may be influencing the result. Under most circumstances, estimates of average service lives and net salvage should be made at intervals of not more than five years.

DETERMINATION OF
STRAIGHT-LINE REMAINING LIFE
DEPRECIATION ACCRUALS

General

The straight-line remaining life method is another method to determine depreciation accruals and is used frequently enough to warrant development in this manual. The factors considered in the straight-line remaining life method tend to control erratic fluctuations in the annual or periodic accruals. This method also has as its objective the control of excessive or deficient accumulations in the depreciation reserve.

Under the straight-line remaining life method, the net depreciable plant is recovered over the estimated remaining useful life of the property. This method differed significantly from the straight-line average service life method under which the depreciable plant is recovered over its entire estimated average life.

The straight-line remaining life method meets the objectives of depreciation accounting. The base for the depreciation charges is the same as the base used in the straight-line average service life method, explained earlier in the text.

The Depreciation Rate Equation

The basic equation for determining the annual depreciation rate by the straight-line remaining life method is:

$$d = \left(\frac{B - C' - U}{E} \right) \times \frac{100}{B}$$

Straight Line Average Service Life

$$d = \frac{100 - c}{L}$$

Where:

B = book cost of the gross depreciable plant in dollars.

C' = estimated net salvage in dollars from survivors.

d = annual depreciation rate in percent.

U = book depreciation reserve in dollars.

E = estimated average remaining life of survivors.

L = *estimated average service life.*

Items B and U are obtainable from the utility's books of accounts. Item C' is estimated based on past experience and conditions likely to occur in the immediate future.

Determination of Annual Depreciation Accrual

The form used and examples of the straight-line remaining life method of calculating annual depreciation accruals are shown in Table I on page 33.

The first two unnumbered columns are for the listing of appropriate plant account number and its corresponding description. Column (1) shows the dollar amount of gross depreciable plant in each account of the utility's books at the beginning of the year. This is element B in the accrual equation.

Columns (2) and (6) show the two elements in the depreciation accrual calculation which must be estimated. They are the percentage of net salvage which can reasonably be expected when the property is retired and the service lives to be assigned to the property.

Column (3) is designed to show the estimated future net salvage dollars calculated by multiplying the plant dollars in Column (1) by the salvage percentage in Column (2). Column (4) is provided for the recorded depreciation reserve taken from the utility's books which, together with the salvage dollars, is deducted from the gross plant amounts to produce the net balance shown in Column (5).

Column (6) shows one weighted average service life for all the plant, units or groups within each account. Column (7) shows the average service life of the survivors (sometimes called probable life) and equals age plus remaining life. Column (9) shows the weighted average remaining life (element E in the accrual equation) in years and is determined either by subtracting the average age in Column (8) from the average service lives in Column (7) or determined directly by either the Forecast, Approximation or Direct Judgment Methods as noted in the footnotes in Table I. The annual accrual in Column (10) is computed by dividing the net balance in Column (5) by the average remaining life in Column (9). Column (11) shows the

depreciation rate for each account derived by dividing the annual accrual in Column (10) by the gross plant in Column (1).

An overall depreciation rate or composite rate for the entire plant is determined by dividing the total annual accrual of all accounts by the total gross plant. The composite depreciation rate in Table I is 3.71%.

The discussion in the text relating to the reasonableness of the annual depreciation accrual, the recording of the depreciation accrual, and general depreciation accounting applies equally to the straight-line remaining life method.

TABLE 'I

SUMMARY OF
ANNUAL DEPRECIATION RATE DETERMINATION
STRAIGHT LINE REMAINING LIFE METHOD

Est.

Est.

Account No.	Description	Gross Plant at Beginning of Year (1)	Est. Future Net Salvage (Est. Gross Salvage Less Cost of Removal) (2)	Depreciation Reserve at Beginning of Year (4)	Net Balance (1)-(3)-(4) (5)	Average Service Life		Average Age Yrs. (8)	Remaining Life Yrs. (9)	Annual Accrual (5):(9) (10)	Depreciation Accrual Rate (10):(11) (11)
						Original Group Yrs. (6)	Survivors Yrs. (7)				
311	Structures & Improvements	19,540	5.0	8,014	10,549	--	--	--	18 1/2	586	3.0
315	Wells	13,786	0.0	9,610	4,168	--	--	--	16 1/2	261	1.9
314	Springs and Tunnels	165	0.0	49	116	--	--	--	10 1/2	6	3.6
324	Pumping Equipment	22,028	2.0	8,294	13,293	25	--	--	15 2/2	886	4.0
332	Water Treatment Equipment	1,813	5.0	531	1,191	18	--	--	13 2/2	92	5.1
343	Trans. & Distr. Mains	170,096	(5.0)	61,743	116,858	30	--	--	10 2/2	6,492	3.8
342	Reservoirs and Tanks	21,103	0.0	6,805	14,298	33	--	--	17 2/2	841	4.0
348	Hydrants	4,105	3.0	315	3,667	25	--	--	21 2/2	175	4.3
345	Services	29,993	(10.0)	12,344	20,648	25	--	--	16 3/2	1,291	4.3
346	Meters	34,865	15.0	6,974	22,661	30	--	--	22 2/2	1,030	3.0
349	Other Trans. & Distr. Plant	931	0.0	120	811	18	22	13	9 1/2	90	9.7
372	Office Furniture & Equipment	657	0.0	214	443	11	12	5	7 1/2	63	9.6
374	Stores Equipment	2,471	5.0	451	1,896	12	13	3	10 1/2	190	7.7
378	Tools, Shop & Garage Equip.	6,579	15.0	2,283	3,309	7	8	4	4 1/2	827	12.6
	TOTALS	328,132	-	(3,531)	213,903	--	--	--	--	12,830	3.91

1/ Remaining life determined by forecast method.

2/ Remaining life determined by selecting survivor curve.

3/ Remaining life determined by computation from accounting records. (See Appendix C)

4/ Column 7 - Column 8.

DEPRECIATION STUDY BY FORECAST OR LIFE SPAN METHOD

Example: A dam is put into service at the beginning of 1961. The estimated life span is 40 years and the estimated time of retirement is the end of the year 2000. No salvage is assumed. Developments occur as follows:

No.	Year End	Event	Additions \$	Retirements \$
1	1963	Outlet works modified	4,500	3,000
2	1965	Spillway modified	6,000	3,000
3	1970	Fencing installed	1,500	-
4	1980	Sealant placed (capitalized)	3,000	-
5	1985	New source of water supply procured. Existing source phased out over a 5-year period after which dam is retired.		

Year	Plant Surviving Beg. of Yr.	Additions \$	Retirements \$	Average Service Life				Depreciation		
				Orig. Dam	Addition No.			Rate %	Accrual \$	Beg. Ir. Reserve
1961	\$42000	-	-	38 ^{1/}				2.63 ^{2/}	1105	
1952	42000	-	-	38				2.63	1105	\$ 1105
1963	42000	4500	3000	38				2.63	1105	2210
1964	43500	-	-	38	38 ^{3/}			2.63	1144	315 ^{4/}
1965	43500	6000	3000	38 ^{5/}	38			2.63 ^{5/}	1144	1459
1966	46500	-	-	20 ^{5/}	20	18		5.00 ^{5/}	2325	(397)
1967	46500	-	-	20	20	18		5.00	2325	1928
1968	46500	-	-	20	20	18		5.00	2325	4253
1969	46500	-	-	20	20	18		5.00	2325	6578
1970	46500	1500	-	20 ^{7/}	20	18		5.00 ^{7/}	2325	9903
1971	48000	-	-	30 ^{7/}	31	29	24	3.33 ^{7/}	1598	11228
1972	48000	-	-	30	31	29	24	3.33	1598	12826
1973	48000	-	-	30	31	29	24	3.33	1598	14424
1974	48000	-	-	30	31	29	24	3.33	1598	16022
1975	48000	-	-	30	31	29	24	3.33 ^{9/}	1598	17520
1976	48000	-	-	33	34	32	27	3.03 ^{9/}	1454	19218
1977	48000	-	-	33	34	32	27	3.03	1454	20672
1978	48000	-	-	33	34	32	27	3.03	1454	22126
1979	48000	-	-	33	34	32	27	3.03	1454	23580
1980	48000	3000	-	33	34	32	27	3.03 ^{11/}	1454	25034
1981	51000	-	-	34	36	34	29	3.13 ^{11/}	1596	26488
1982	51000	-	-	34	36	34	29	3.13	1596	28084
1983	51000	-	-	34	36	34	29	3.13	1596	29680
1984	51000	-	-	34	36	34	29	3.13	1596	31276
1985	51000	-	-	34	36	34	29	3.13 ^{13/}	1596	32872
1986	51000	-	-	26	27	25	20	4.17 ^{13/}	2127	34468
1987	51000	-	-	26	27	25	20	4.17	2127	36595
1988	51000	-	-	26	27	25	20	4.17	2127	38722
1989	51000	-	-	26	27	25	20	4.17	2127	40849
1990	51000	-	51000	26	27	25	20	4.17	2127	42976
1991	-	-	-	-	-	-	-	-	-	(5897) ^{3/}

(See Sheets 2 & 3 for Footnotes)

Footnotes:

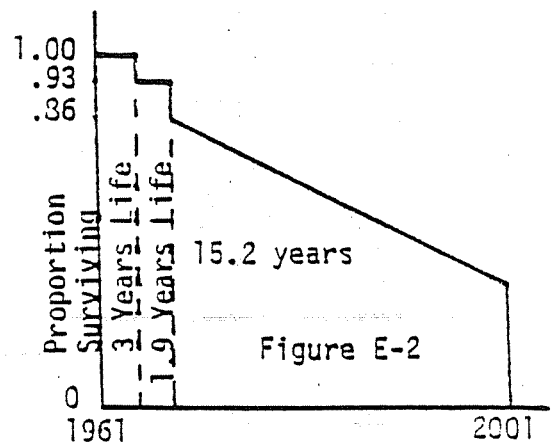
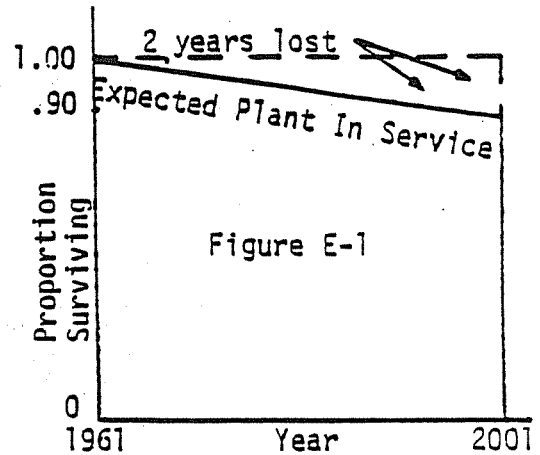
1/ It is assumed that 10% of the original installation will be retired in piecemeal (interim) retirements over the life of the dam, which would average to 0.25% per year. Over a 40-year period this would amount to a loss of 2 years' service life ($\frac{1}{2} \times 40 \times .10$). See Figure E-1.

2/ Assuming zero salvage, the depreciation rate is $100 \div 38 = 2.63\%$ and the Accrual is $.0263 \times 42000$ or \$1,105.

3/ It is assumed that depreciation studies are made every 5 years, as recommended in the text of this practice. Thus, the 1963 addition takes the same life as the original addition until the time of the next study.

4/ Depreciation reserve at the end of the third year (beginning of fourth year) is prior years' reserve of \$2,210 plus \$1,105 accrual less \$3000 retirement.

5/ A depreciation study made as of the beginning of 1966 determines that the experienced interim retirement rate is $(0 + 0 + 3000 + 0 + 3000) \div (42,000 + 42,000 + 42,000 + 43,500 + 43,500)$, which equals 2.82%. For the remaining 35 years, this represents a loss of life of $\frac{1}{2} \times 35 \times (.0282 \times 35)$, or 17.3 years. The remaining life is $35 - 17.3$ or 17.7 years for the remaining plant. It would apply to the 1965 placement. The unrealized life of the original placement would be 86% of this, or 15.2 years. See Figure E-2. During the first 3 years, when the original placement was intact, the life that was realized was a full 3 years. During the next two, when only 93% of the original investment still survived, the realized life was $2 \times .93$ or 1.9 years. The average service life for the full span is $3 + 1.9 + 15.2$, or 20.1 years. For the 1963 placement, from which nothing has been retired, the realized life is 2.0 years and the unrealized life is 17.7 for a total of 19.7. Both of these would round to 20 years.



6/ Composite average service life is:

Vintage a	Plant Surviving b	Service Life c	Accrual d=b+c
1961	\$36000	20	\$1800
1963	4500	20	225
1965	6000	18	333
	<u>\$46500</u>	<u>19.7 years*</u>	<u>\$2358</u>

* 19.7 yr. from $46,500 \div 2358$ use 20

$$\text{Depreciation rate} = \frac{100}{20} = 5.0\%$$

7/ At the time of the 1971 depreciation study, the experienced interim retirement rate is $6000 \div (3 \times 42,000 + 2 \times 43,500 + 5 \times 46,500)$, or 1.35%. For the remaining 30 years the loss of life is $\frac{1}{2} \times 30 \times (.0135 \times 30)$, or 6.1 years and the remaining life is 23.9 years. This applies directly to the 1970 addition and is added to the realized lives of 5 and 7 years for the 1965 and 1963 additions. The realized life of the 1961 addition is $3 \times 1.0 + 2 \times .93 + 5 \times .86$, or 9.2 years and the unrealized life is $.86 \times 23.9$, or 20.6 for a total average service life of 29.8 years. The composite life using the procedure as in 6/ above is 30 years and the depreciation rate is 3.33%.

8/ For the 1976, 1981 and 1986 studies, the following factors can be derived using the same procedures as above:

Date of Study	Experienced Int. Ret. Rate-%	Remaining Life	Composite Life	Depreciation Rate-%
1976	0.88	22.3	33	3.03
1981	0.65	18.7	32	3.13
1986	0.51	4.9	24	4.17

9/ Because of the reduction in the life span of the dam from 40 to 30 years, there is a shortage in the reserve at the time of retirement of the dam. The shortage is not large, however, when compared with annual accruals and no corrective measures should be taken. Rather, the span of the replacement facility should be adjusted downward as, for example, from 40 to 30 years, in expectation of a similar overestimation. The beginning interim retirement rate should also be higher (0.5 instead of 0.25), reflecting past experience.

Form D-5		REALIZED LIFE AND REMAINING LIFE OF PLANT COMPUTED FROM ACCOUNTING RECORDS AS OF 1/1 <u>60</u>		
UTILITY Alpha Water Company				
AREA/DEPT <u>-</u>				
AC <u>345</u> <u>Services</u>				
YEAR	GROSS ADDITONS		TRANSFERS IN AND (OUT)	PLANT BALANCES (END OF YEAR)
	RECORDED	ADJUSTED		
1959	\$1,923	\$1,923	-	\$29,993
58	2,705	2,705	-	28,518
57	1,620	1,620	-	26,225
56	1,278	1,278	-	24,998
55	1,127	1,127	-	23,992
1954	1,431	1,431	-	23,083
53	1,733	2,054	321*	21,901
52	983	983	-	20,018
51	308	308	-	19,114
50	447	447	50	18,806
1949	959	959	-	18,309
48	1,323	1,323	-	17,410
47	1,076	1,076	-	16,154
46	1,442	1,442	-	15,209
45	1,193	1,193	-	13,873
1944	1,754	1,754	-	12,791
43	1,893	1,893	-	11,110
42	1,276	1,276	-	9,244
41	521	-	-	8,048
40	409	-	-	7,617
19				
			* Originally devoted to public service in 1944.	
TOTALS	(1)	24,792	(2) 371	(3) 358,797

TOTALS TAKEN FROM MOST RECENT YEAR BACK TO SELECTED BEGINNING YEAR OF <u>1942</u>			
(4) Beginning Plt. Bal.	<u>8,048</u>	(5) 1/2 Beg. Plt. Balance	<u>4,024</u>
(6) Plant Exposed=(1)+(4)	<u>32,340</u>	(8) 1/2 Surviving Balance	<u>14,997</u>
(7) Plant Surviving	<u>29,993</u>	(10) \$ Years=(3)-(5)-(8)	<u>339,776</u>
(9) Portion Surviving=(7)/(6)	<u>0.9133</u>	(9 x 371)	
(11) Correction to Past Dollar Years for Transfers:	<u>3,339</u>		
(12) Estimated Av. Serv. Life	<u>35.00 Yrs.</u>	(13) Past Dollar Years	<u>343,115</u>
(14) Realized Life=(13)/(6)	<u>10.45</u>	(16) Rem. Life=(15)/(9)	<u>26.88 Yrs.</u>
(15) Difference(12)-(14)	<u>24.55</u>	(17) Conclusion: (Use Rounded Value) Remaining Life	<u>27 Yrs.</u>

RANGE OF DEPRECIATION RESERVE FOR AVERAGE REALIZED LIFE¹

Average Realized Life In Years	Range of Depreciation Reserve As A Percentage Of Plant In Service		
	For 30-Year Life	For 45-Year Life	For 60-Year Life
1	2 to 4	1 to 3	1 to 2
2	5 to 7	3 to 5	2 to 4
3	7 to 10	5 to 7	4 to 5
4	10 to 13	6 to 9	5 to 7
5	12 to 16	8 to 11	6 to 8
6	14 to 19	10 to 13	7 to 10
7	16 to 22	11 to 15	8 to 12
8	18 to 24	13 to 17	10 to 13
9	19 to 27	14 to 19	11 to 15
10	24 to 29	16 to 21	12 to 16
11	26 to 31	18 to 23	13 to 17
12	27 to 33	19 to 24	14 to 19
13	29 to 35	21 to 26	15 to 20
14	30 to 37	22 to 27	16 to 22
15	31 to 39	24 to 29	17 to 23
16	32 to 40	25 to 30	18 to 24
17	33 to 42	26 to 31	19 to 25
18	34 to 43	27 to 33	21 to 27
19	35 to 43	28 to 34	23 to 28
20	36 to 43	29 to 36	24 to 29
21	36 to 43	30 to 37	25 to 30
22	36 to 43	31 to 38	26 to 31
23		32 to 39	27 to 32
24		32 to 40	27 to 33
26		34 to 42	29 to 35
28		35 to 43	30 to 37
30		36 to 43	31 to 39
32		36 to 43	32 to 40
35		36 to 43	34 to 42
45			36 to 43

¹For the guideline reserves, the dispersion characteristics of Iowa Curves of the R₁, R₂, and L₁ and L₂ shapes were used; the net salvage was assumed to be zero.

**ASSET GUIDELINE CLASSES AND PERIODS, ASSET
DEPRECIATION RANGES, AND ANNUAL ASSET GUIDELINE
REPAIR ALLOWANCE PERCENTAGE**

Asset guide- line class	Description of assets included	Asset depreciation range (in years)			Annual asset guideline repair allowance percentage
		Lower limit	Asset guideline period	Upper limit	
SPECIFIC DEPRECIABLE ASSETS USED IN ALL BUSINESS ACTIVITIES, EXCEPT AS NOTED:					
00.11	Office Furniture, Fixtures, & Equip- ment: Includes furniture & fixtures which are not a structural component of a building. Includes such assets as desks, files, safes, and communica- tions equipment. Does not include communications equipment that is included in other CLADR classes	8	10	12	2
00.13	Data Handling Equipment, except Computers: Includes only typewriters, cal- culators, adding & accounting machines, copiers, & duplicat- ing equipment	5	6	7	15
00.22	Automobiles	2.5	3	3.5	16.5
00.241	Light General Purpose Trucks: Includes trucks for use over the road (actual unloaded weight less than 13,000 pounds)	3	4	5	16.5
DEPRECIABLE ASSETS USED IN THE FOLLOWING ACTIVITIES:					
49.3	Water Utilities: Includes assets used in the gather- ing, treatment, & commercial dis- tribution of water	40	50	60	1.5

INDEX

	Page
A	
Accelerated methods	19
Account(s)	4, 15
Accounting practices	iv, 12
Accrual equation	30, 31
Action of the elements	4
Additions	18, 28
Administrative and general expenditures	3
Age	6, 13, 14, 31
Annual accrual (depreciation-accrual)	24, 25, 26
Annual depreciation accrual, determination of	24, 29, 30
Annual depreciation rate determination	25, 30
Anticipated changeover	4
Approximation	31
Asbestos-Cement pipe	5
Asset depreciation range (ADR)	20, 39
Average age	6, 18, 33
Average gross salvage	14
Average life	6, 10
Average net salvage	14, 23
Average realized life	18, 38
Average remaining life of survivors	30
Average service life (lives)	iii, iv, 2, 4, 5, 7, 8, 9, 10, 11, 15, 16, 18, 23, 24, 25, 26, 28, 31, 33
Average service life estimates	4
Average service life weighting	16
Average service lives, typical	iii, 11
B	
Base for depreciation charges	3
Book cost of gross depreciable plant	30
Book depreciation reserve	30
Book reserve	17
Buildings	9
Bulletin F	19
C	
Capitalized interest during construction	3
Cast iron pipe	5
Categories of water utility plant	2
Character	4
Class life asset depreciation range (CLADR)	20, 21, 22, 23
Class life (CL) system	20, 21, 22, 23
Classes of utility property	5
Clearing accounts	2
Collecting and impounding reservoirs	11
Communication equipment	11

Composite	5, 15; 16, 24, 25, 28, 32
Construction costs	3
Continuing property account (records) Cost	23 2, 3, 13, 17, 21, 22, 24, 30
Cost of labor	3
Cost of organizing	3
Cost of removal	12, 21
Cost of service	2
D	
Damages	3, 12
Dam (s)	9, 34, 35, 36
Decay	4
Definitions	1
Depreciable plant (property)	3, 6, 7, 19, 21, 24, 26, 29, 30
Depreciation	1, 2, 3, 9, 19 22, 23, 24, 29
Depreciation accounting	29, 32
Depreciation accrual	1, 17, 24, 26, 29, 30, 31, 32
Depreciation accrual, determination of annual	24
Depreciation accrual and rate determination straight-line remaining life method	33
Depreciation accrual, recording of	32
Depreciation base	3
Depreciation determination, annual	25
Depreciation, Federal income tax	19
Depreciation practices for small gas and electric utilities	iv
Depreciation practices for small telephone utilities	iii
Depreciation rate(s)	1, 2, 5, 13, 21 24, 25, 26, 27, 30, 32
Depreciation rate calculations	23, 25
Depreciation rate equation	30
Depreciation rate, straight-line remaining life	33
Depreciation rates for small water- utilities, typical	11
Depreciation reserve	12, 17, 29, 30, 31
E	
Engineering	3
Engineering, Committee on	v
Engineering estimates	4
Engineering judgment(s)	9, 12, 14
Equipment	3
Estimate of future conditions	4
Estimated net salvage	2, 14

Exhaustion	19
Expected life of the survivors	6
F	
Federal income tax depreciation	19
Fire mains	4, 11
Forced relocations	12
Forecast of life span method	9, 33, 34
Foreword	iii
Franchises	3
Frequency curve	6, 8
Function	4
Future effect	4
Future net salvage	14, 31, 33
G	
Galleries and tunnels	11
General expenditures	3
General plant	11
Gross additions	37
Gross depreciable plant	24, 25, 26, 30
Gross plant	15, 16, 31, 32, 33
Gross salvage	12, 13, 14, 21, 27
Guideline life	19
H	
Hydrants	4, 11, 33
I	
Inadequacy	4
Individual item of plant	4
Injuries and damages	3
Insurance	3
Intangible plant	3
Interest	3
Interest during construction	3
Interim additions	9
Internal Revenue Code 1954	19
Iowa curves	38
J	
Judgment method	31
K	
L	
Laboratory equipment	11
Labor, cost of	3
Lake, river and other intakes	11

Land	3
Liberalized depreciation	19
Life estimates	10
Life span or forecast method depreciation study	34
Life weight	16

M

Mains, transmission and distribution	4
Maintenance standards	iv
Manual of definitions	iv
Materials	3
Meters	4, 11, 33
Meter installations	11
Mortality characteristics	4
Mortality data	10
Mortality dispersion	18

N

Net salvage	iii, 2, 12, 13, 14, 16, 17, 18, 21, 28, 30, 31
Net salvage estimate	12
Net salvage, pumping equipment, average and future	14
Net salvage value, determination of	13
Net salvage value pumping equipment, weighted	16
Nondepreciable	3

O

Objectives of depreciation	2
Obsclescence	4, 19
Office supplies and expenses	3
Office furniture and equipment	11, 33
Operating expenses	2
Original cost	3, 27
Other expenses	3
Other pumping plant	11

P

Past experience	4
Past retirements	18
Percentage of plant in service	38
Physical appearance	4
Placement of plant	6
Plant	31
Plant accounts	27, 28, 30
Plant investment	2
Power operated equipment	11
Probable life	6, 8, 10, 31
Public requirements	4
Public service	3

Public utility depreciation practices	iii, 1, 14, 18
Pumping equipment	11, 15, 33
Pumping plant	11
Purpose	1

Q

R

Realized gross salvage	14
Realized life and remaining life of plant	37
Reasonableness of final report (annual accrual)	28
Reciprocal average	5
Reciprocal weighting	15
Recording the depreciation accrual	26
Remaining life	6, 7, 30, 31, 32, 33
Repair allowance	21, 22, 39
Reserve for depreciation	12
Reservoirs	9
Reservoirs and tanks	11, 33
Resolution Re Adoption of Depreciation Practices for Small Water Utilities	v
Retired plant	5
Retirement(s)	6, 12, 13 18, 27, 28
Retirement curve	5
Retirement ratios	6
Revenue Procedure 62-21	19, 20
Revenue Procedure 77-10	21

S

Salaries, general officers and clerical	3
Salvage rates typical for small water utilities	11
Scope	1
Scope of manual	1
Section 167	19, 20, 21, 22
Service life (lives)	iii, 4, 5, 7, 18, 31
Service life estimates, average	4, 7, 10
Service life pumping equipment, weighted average	15
Services	4, 11, 33, 37
Short lived (units) (plant)	6, 13, 17
Small water utilities	iii, 1, 18
Source of supply plant	11
Span of years	6
Specific plans of management	4
Staff Committee on Engineering	v
Steel pipe	5
Stores equipment	11, 33
Straight-line average service life method	2, 24, 25
Straight-line methods	19
Straight-line remaining life	2, 29, 30

Stub Survivor Curve	8
Structures and improvements	11,33
Subaccounts	4
Subcommittee, Depreciation	iii,iv,v
Supervision	3
Supply mains	11
Surviving plant	5
Survivor curve	5,6,7,8
Survivor curve and related curves	8
Survivor curve method	6

T

Table of Contents	i,ii
Taxes	3
Test of reasonableness	28
Theoretical reserve studies	17
Tools, shop, and garage equipment	11,33
Total, annual accrual	32
Transfers	37
Transmission and distribution mains	4,11,33
Transmission and distribution plant	11
Transportation equipment	11
Treatment plants	9

U

Unit(s)	4,6,13,14, 15,16,31
Units of property	9
Useful life	2,29

V

Vintage	20,22,36
---------	----------

W

Water treatment equipment	11,33
Water treatment plant	11
Wear and tear	4,19
Weighted average	5,16,31
Weighted net salvage value	17
Weighting	16,17
Wells	33
Wells and springs	11

XYZ

2016 AWWA Compensation Survey

Rural Water and Wastewater Utilities
serving populations under 10,000



American Water Works
Association

USING THIS SURVEY

Definitions

Below is a list of definitions that were used in organizing survey data. The example and definitions on the following pages illustrate how to read and interpret the survey results.

A1 *Number of Utilities*

Represents the total number of utilities providing survey data for the specific job. In this example, 365 facilities provided data for the Wastewater Treatment Plant Manager job.

A2 *Number of Employees*

Represents the total number of employees reported occupying the job. In this example, the total is 393. This number may be higher than the Number of Utilities when facilities report multiple incumbents for the job. This number will be lower than the Number of Utilities when facilities have vacant jobs, but still reported salary range information.

A3 *Average Number of Employees Supervised*

For jobs with supervisory responsibilities, this number represents the average number of employees supervised. In this example, of those who reported supervisory responsibilities, the average number of employees supervised is 16.

A4 *50th Percentile*

Statistically, this represents the pay rate at which half of incumbents fall below and half are above, also known as the median. The 50th Percentile for Board Operated facilities, in the sample, is \$55,213.

A5 *Company Weighted Average Pay*

Represents the sum of all average rates reported for each facility divided by the number of facilities. The average salary for Board Operated facilities, in the sample, is \$56,888.

A6 *Employee Weighted Average Pay*

This figure is the sum of rates for all employees within all facilities divided by the number of employees. Use of the weighted average gives more weight to data from a facility that employs several people in a particular job, as compared to data from a facility that employs only one or two people in the job. The example shows \$56,614 as the Employee Weighted Average Pay for Board Operated facilities.

A7 *Average Salary Range—Minimum*

This is the lowest value in an established salary range. This typically represents the start rate an organization uses when filling a vacancy with a candidate who satisfies the minimum education requirements and has no relevant experience. The example shows \$44,053 as the average salary range minimum for City/County facilities.

A8 *Average Salary Range—Midpoint*

This rate is halfway between the minimum and maximum of an established pay range. Generally, this is considered to be the competitive market rate for a position assigned to this range. The example shows \$52,221 as the average salary range midpoint for City/County facilities.

A9 *Average Salary Range—Maximum*

This is the highest rate of the established salary range, representing the highest salary at which an employee in the job could expect to be paid. The example shows \$61,075 as the average salary range maximum for City/County facilities.

A10 *Insufficient Data*

Where there are fewer than five responses provided for a breakout of data, an asterisk (*) will be printed to maintain individual participant confidentiality.

American Water Works Association - Rural - 2016

All Participants

Job R100 - Rural System General Manager (Superintendent)

Responsible for office and field administration, planning, reporting and policy administration. Hires and terminates employees and determines compensation. Responsible for public relations and compliance policies. Reports directly to board of directors or city council and may supervise contract, office, plant, distribution and operations employees.

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	131	136	13	\$81,120	\$86,020	\$85,012	\$71,276	\$84,708	\$100,520
Board Operated	66	73	11	\$89,800	\$93,548	\$91,186	\$81,925	\$96,441	\$114,530
City/County	51	49	16	\$73,596	\$77,600	\$77,261	\$64,521	\$76,660	\$90,619
Private	3	3	*	*	*	*	*	*	*
Other	11	11	11	\$70,000	\$80,463	\$80,463	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	63	61	17	\$94,000	\$97,064	\$97,064	\$76,114	\$90,081	\$106,986
< 5,000	68	75	9	\$73,500	\$75,813	\$75,209	\$66,265	\$79,144	\$93,823

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	13	13	39	\$130,000	\$127,679	\$127,679	\$94,213	\$113,544	\$136,919
< 25	118	123	10	\$77,782	\$81,270	\$80,502	\$68,577	\$81,316	\$96,238

American Water Works Association - Rural - 2016

All Participants

Job R100 - Rural System General Manager (Superintendent)

Summary of All Reported Data by AWWA Section

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
AKA	2	2	*	*	*	*	*	*	*
ALA	1	1	*	*	*	*	*	*	*
ARI	3	3	*	*	*	*	*	*	*
ATC	1	1	*	*	*	*	*	*	*
BRC	1	1	*	*	*	*	*	*	*
CAL	16	15	15	\$115,000	\$116,541	\$116,541	\$96,679	\$115,466	\$136,107
CHS	1	1	*	*	*	*	*	*	*
CON	1	1	*	*	*	*	*	*	*
FLA	3	3	*	*	*	*	*	*	*
GEO	0	0	*	*	*	*	*	*	*
HWI	0	0	*	*	*	*	*	*	*
ILL	1	1	*	*	*	*	*	*	*
IND	6	6	12	\$57,750	\$67,608	\$67,608	*	*	*
INT	4	4	*	*	*	*	*	*	*
IWA	7	15	15	\$84,000	\$92,206	\$81,429	*	*	*
KAN	0	0	*	*	*	*	*	*	*
KNT	3	2	*	*	*	*	*	*	*
MIC	7	7	7	\$58,000	\$62,623	\$62,623	\$48,785	\$56,396	\$68,228
MIN	3	3	*	*	*	*	*	*	*
MOU	1	1	*	*	*	*	*	*	*
MTN	1	1	*	*	*	*	*	*	*
NDK	0	0	*	*	*	*	*	*	*
NEB	3	3	*	*	*	*	*	*	*
NEJ	0	0	*	*	*	*	*	*	*
NEW	12	12	5	\$78,596	\$76,799	\$76,799	*	*	*
NEY	3	3	*	*	*	*	*	*	*
NOC	2	2	*	*	*	*	*	*	*
OHO	4	4	*	*	*	*	*	*	*
ONT	0	0	*	*	*	*	*	*	*
PAC	11	11	12	\$85,000	\$89,428	\$89,428	*	*	*
PEN	5	5	9	\$80,000	\$78,941	\$78,941	*	*	*
PRT	0	0	*	*	*	*	*	*	*
RMT	9	9	5	\$92,185	\$88,667	\$85,593	\$70,086	\$83,241	\$97,801
RTM	0	0	*	*	*	*	*	*	*
SCR	1	1	*	*	*	*	*	*	*
SDK	0	0	*	*	*	*	*	*	*
SOW	3	3	*	*	*	*	*	*	*
TEX	9	9	8	\$85,000	\$86,402	\$86,402	*	*	*
VIR	0	0	*	*	*	*	*	*	*
WEV	0	0	*	*	*	*	*	*	*
WIS	6	6	13	\$70,100	\$82,652	\$82,652	*	*	*

American Water Works Association - Rural - 2016

Water Participants

Job R100 - Rural System General Manager (Superintendent)

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	51	59	11	\$81,120	\$83,339	\$91,801	\$78,224	\$91,951	\$107,914
Board Operated	31	39	10	\$82,000	\$85,804	\$82,972	\$83,425	\$95,337	\$111,149
City/County	13	13	13	\$77,500	\$75,308	\$75,308	\$69,190	\$83,254	\$97,756
Private	1	1	*	*	*	*	*	*	*
Other	6	6	15	\$76,000	\$90,379	\$90,379	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	27	27	15	\$85,280	\$91,797	\$91,797	\$85,992	\$99,887	\$118,503
< 5,000	24	32	7	\$70,000	\$73,823	\$73,367	\$71,234	\$84,808	\$98,383

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	4	4	*	*	*	*	*	*	*
< 25	47	55	10	\$75,000	\$79,718	\$78,595	\$76,205	\$88,499	\$102,856

American Water Works Association - Rural - 2016

Water/Waste Water Participants

Job R100 - Rural System General Manager (Superintendent)

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	80	77	14	\$81,432	\$87,820	\$87,472	\$67,802	\$81,087	\$96,823
Board Operated	35	34	13	\$96,454	\$100,608	\$100,608	\$80,854	\$97,230	\$116,945
City/County	38	36	16	\$72,000	\$78,451	\$77,967	\$62,742	\$74,148	\$87,900
Private	2	2	*	*	*	*	*	*	*
Other	5	5	7	\$60,000	\$68,565	\$68,565	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	36	34	19	\$96,954	\$101,247	\$101,247	\$71,669	\$85,668	\$101,803
< 5,000	44	43	10	\$76,523	\$76,951	\$76,580	\$63,504	\$75,997	\$91,289

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	9	9	45	\$135,000	\$128,474	\$128,474	*	*	*
< 25	71	68	10	\$80,000	\$82,359	\$82,045	\$65,090	\$78,032	\$93,212

American Water Works Association - Rural - 2016

All Participants

Job R140 - Rural System Office Manager

Responsible for supervision of all administrative functions at the utility, including maintaining office supplies and coordinating office administrative schedules. Supervises other administrative personnel. May also be responsible for certain accounting activities, including billing, processing utility payments, bank deposits, drawing warrants for payment of delinquent bills, and processing payroll, along with taking minutes at meetings and serving as receptionist.

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	79	81	3	\$48,256	\$52,688	\$52,206	\$49,117	\$59,754	\$70,637
Board Operated	51	54	3	\$52,790	\$53,636	\$52,859	\$51,566	\$62,976	\$75,839
City/County	22	21	5	\$43,563	\$50,214	\$50,214	\$46,998	\$56,723	\$64,841
Private	1	1	*	*	*	*	*	*	*
Other	5	5	*	\$45,441	\$53,952	\$53,952	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	37	37	3	\$55,788	\$57,942	\$57,538	\$46,259	\$56,563	\$66,417
< 5,000	42	44	4	\$45,221	\$48,185	\$47,722	\$54,119	\$65,338	\$78,023

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	7	7	4	\$81,456	\$74,489	\$74,489	*	*	*
< 25	72	74	3	\$46,280	\$50,539	\$50,098	\$48,559	\$58,991	\$69,938

Michigan Water Works Association - Rural - 2016

Job R140 - Rural System Office Manager

All Participants

Summary of All Reported Data by AWWA Section

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
AKA									
ALA	0	0	*	*	*	*	*	*	*
ARI	1	1	*	*	*	*	*	*	*
ATC	2	2	*	*	*	*	*	*	*
BRC	0	0	*	*	*	*	*	*	*
CAL	0	0	*	*	*	*	*	*	*
CHS	11	11	4	\$69,204	\$69,254	\$69,254	\$62,195	\$80,645	\$98,190
CON	1	1	*	*	*	*	*	*	*
FLA	1	1	*	*	*	*	*	*	*
GEO	1	1	*	*	*	*	*	*	*
HWI	0	0	*	*	*	*	*	*	*
ILL	0	0	*	*	*	*	*	*	*
IND	0	0	*	*	*	*	*	*	*
INT	5	5	*	\$46,280	\$45,131	\$45,131	*	*	*
IWA	1	1	*	*	*	*	*	*	*
KAN	4	6	*	*	*	*	*	*	*
KNT	0	0	*	*	*	*	*	*	*
MIC	2	2	*	*	*	*	*	*	*
MIN	4	4	*	*	*	*	*	*	*
MOU	2	2	*	*	*	*	*	*	*
MTN	0	0	*	*	*	*	*	*	*
NDK	0	0	*	*	*	*	*	*	*
NEB	0	0	*	*	*	*	*	*	*
NEJ	2	2	*	*	*	*	*	*	*
NEW	0	0	*	*	*	*	*	*	*
NEY	8	8	*	*	*	*	*	*	*
NOC	0	0	*	\$54,000	\$50,808	\$50,808	*	*	*
OHO	1	1	*	*	*	*	*	*	*
ONT	4	4	*	*	*	*	*	*	*
PAC	0	0	*	*	*	*	*	*	*
PEN	7	7	*	*	*	*	*	*	*
PRT	4	5	*	\$45,000	\$47,794	\$47,794	*	*	*
RMT	0	0	*	*	*	*	*	*	*
RTM	4	4	*	*	*	*	*	*	*
SCR	0	0	*	*	*	*	*	*	*
SDK	0	0	*	*	*	*	*	*	*
SOW	0	0	*	*	*	*	*	*	*
TEX	2	2	*	*	*	*	*	*	*
VIR	7	7	2	*	*	*	*	*	*
WEV	0	0	*	\$48,660	\$47,901	\$47,901	*	*	*
WIS	0	0	*	*	*	*	*	*	*
	4	4	*	*	*	*	*	*	*

American Water Works Association - Rural - 2016

Water Participants

Job R140 - Rural System Office Manager

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	34	36	3	\$45,640	\$51,182	\$50,450	\$51,241	\$63,465	\$75,360
Board Operated	27	29	3	\$45,000	\$49,450	\$48,660	\$51,305	\$63,510	\$77,380
City/County	4	4	*	*	*	*	*	*	*
Private	0	0	*	*	*	*	*	*	*
Other	3	3	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	19	19	3	\$58,884	\$59,483	\$59,483	\$51,005	\$64,582	\$77,284
< 5,000	15	17	2	\$38,700	\$40,667	\$40,354	*	*	*

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	2	2	*	*	*	*	*	*	*
< 25	32	34	3	\$43,500	\$48,867	\$48,227	\$50,556	\$62,175	\$74,532

American Water Works Association - Rural - 2016

Water/Waste Water Participants

Job R140 - Rural System Office Manager

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	45	45	4	\$48,500	\$53,852	\$53,611	\$48,194	\$58,140	\$88,584
Board Operated	24	25	4	\$55,225	\$58,344	\$57,730	\$51,696	\$62,709	\$75,069
City/County	18	17	5	\$43,563	\$49,380	\$49,380	\$43,962	\$52,768	\$60,808
Private	1	1	*	*	*	*	*	*	*
Other	2	2	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	18	18	3	\$48,339	\$56,219	\$55,484	\$43,338	\$51,629	\$59,729
< 5,000	27	27	5	\$48,660	\$52,361	\$52,361	\$54,506	\$66,606	\$80,094

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	5	5	*	\$64,122	\$68,993	\$68,993	*	*	*
< 25	40	40	4	\$48,173	\$51,911	\$51,688	\$47,703	\$57,626	\$67,969

American Water Works Association - Rural - 2016

All Participants

Job R150 - Rural System Bookkeeper (Accountant, if certified)

Responsible for maintaining the system's financial accounts. Typically pays vendor and utility bills, processes receivables and deposits and maintains accurate records of all financial transactions. Is not required to possess an accounting certificate.

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	49	50	3	\$47,996	\$51,037	\$50,745	\$44,677	\$52,701	\$61,536
Board Operated	27	27	2	\$53,019	\$56,683	\$56,361	\$49,132	\$58,126	\$68,018
City/County	16	17	5	\$38,513	\$40,269	\$40,224	\$35,561	\$41,801	\$49,199
Private	1	1	*	*	*	*	*	*	*
Other	5	5	*	\$53,475	\$51,342	\$51,342	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	26	27	3	\$58,319	\$58,277	\$57,582	\$45,434	\$53,810	\$62,904
< 5,000	23	23	3	\$40,492	\$42,480	\$42,720	\$43,583	\$51,100	\$59,560

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	9	9	*	\$60,683	\$54,452	\$54,452	*	*	*
< 25	40	41	3	\$47,840	\$50,249	\$49,932	\$43,347	\$51,344	\$60,104

American Water Works Association - Rural - 2016

All Participants

Job R150 - Rural System Bookkeeper (Accountant, if certified)

Summary of All Reported Data by AWWA Section

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
AKA	0	0	*	*	*	*	*	*	*
ALA	1	1	*	*	*	*	*	*	*
ARI	2	2	*	*	*	*	*	*	*
ATC	0	0	*	*	*	*	*	*	*
BRC	1	1	*	*	*	*	*	*	*
CAL	10	9	*	*	*	*	*	*	*
CHS	0	0	*	\$63,283	\$61,088	\$61,088	\$52,590	\$61,597	\$71,556
CON	0	0	*	*	*	*	*	*	*
FLA	2	2	*	*	*	*	*	*	*
GEO	0	0	*	*	*	*	*	*	*
HWI	0	0	*	*	*	*	*	*	*
ILL	1	1	*	*	*	*	*	*	*
IND	2	2	*	*	*	*	*	*	*
INT	3	3	*	*	*	*	*	*	*
IWA	4	5	*	*	*	*	*	*	*
KAN	0	0	*	*	*	*	*	*	*
KNT	2	2	*	*	*	*	*	*	*
MIC	2	2	*	*	*	*	*	*	*
MIN	1	1	*	*	*	*	*	*	*
MOU	0	0	*	*	*	*	*	*	*
MTN	0	0	*	*	*	*	*	*	*
NDK	0	0	*	*	*	*	*	*	*
NEB	1	1	*	*	*	*	*	*	*
NEJ	0	0	*	*	*	*	*	*	*
NEW	2	2	*	*	*	*	*	*	*
NEY	0	0	*	*	*	*	*	*	*
NOC	2	2	*	*	*	*	*	*	*
OHO	1	1	*	*	*	*	*	*	*
ONT	0	0	*	*	*	*	*	*	*
PAC	3	3	*	*	*	*	*	*	*
PEN	2	2	*	*	*	*	*	*	*
PRT	0	0	*	*	*	*	*	*	*
RMT	0	0	*	*	*	*	*	*	*
RTM	0	0	*	*	*	*	*	*	*
SCR	1	1	*	*	*	*	*	*	*
SDK	0	0	*	*	*	*	*	*	*
SOW	2	3	*	*	*	*	*	*	*
TEX	2	2	*	*	*	*	*	*	*
VIR	0	0	*	*	*	*	*	*	*
WEV	0	0	*	*	*	*	*	*	*
WIS	2	2	*	*	*	*	*	*	*

American Water Works Association - Rural - 2016

Water Participants

Job R150 - Rural System Bookkeeper (Accountant, if certified)

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	15	16	*	\$48,000	\$48,515	\$48,483	\$45,020	\$53,104	\$62,732
Board Operated	9	10	*	\$49,282	\$52,498	\$52,049	\$45,020	\$53,104	\$62,732
City/County	4	4	*	*	*	*	*	*	*
Private	0	0	*	*	*	*	*	*	*
Other	2	2	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	10	10	*	\$55,056	\$55,618	\$55,618	*	*	*
< 5,000	5	6	*	\$37,526	\$34,310	\$36,592	*	*	*

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	2	2	*	*	*	*	*	*	*
< 25	13	14	*	\$48,000	\$49,345	\$49,249	\$45,020	\$53,104	\$62,732

American Water Works Association - Rural - 2016

Water/Waste Water Participants

Job R150 - Rural System Bookkeeper (Accountant, if certified)

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	34	34	3	\$47,840	\$52,183	\$51,810	\$44,576	\$52,582	\$61,184
Board Operated	18	17	2	\$55,307	\$58,898	\$58,898	\$51,416	\$60,916	\$70,955
City/County	12	13	5	\$40,350	\$42,712	\$42,465	\$35,561	\$41,801	\$49,199
Private	1	1	*	*	*	*	*	*	*
Other	3	3	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	16	17	2	\$60,342	\$59,940	\$58,737	\$45,027	\$52,945	\$61,010
< 5,000	18	17	3	\$41,400	\$44,883	\$44,883	\$44,069	\$52,174	\$61,380

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	7	7	*	\$60,683	\$57,690	\$57,690	*	*	*
< 25	27	27	3	\$45,906	\$50,701	\$50,286	\$42,750	\$50,716	\$59,165

American Water Works Association - Rural - 2016

All Participants

Job R160 - Rural System Accounting Clerk

Responsible for assisting the bookkeeper or office manager with billing functions. May assist customers who pay in person by collecting cash and checks, processing credit cards, issuing receipts and fielding questions and complaints. May also collect and process meter readers' reports.

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	62	74	2	\$40,000	\$39,426	\$40,117	\$33,602	\$40,404	\$47,783
Board Operated	34	43	*	\$41,042	\$40,199	\$40,883	\$35,731	\$42,768	\$50,199
City/County	22	25	*	\$34,263	\$37,225	\$38,169	\$31,695	\$38,467	\$45,912
Private	1	1	*	*	*	*	*	*	*
Other	5	5	*	\$43,160	\$42,489	\$42,489	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	32	41	*	\$41,400	\$41,908	\$42,133	\$34,970	\$41,657	\$48,647
< 5,000	30	33	*	\$34,900	\$36,861	\$37,613	\$30,592	\$37,646	\$45,882

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	9	12	*	\$45,728	\$45,341	\$45,855	\$33,157	\$40,962	\$48,297
< 25	53	62	2	\$38,617	\$38,402	\$39,007	\$33,705	\$40,275	\$47,664

American Water Works Association - Rural - 2016

All Participants

Job R160 - Rural System Accounting Clerk

Summary of All Reported Data by AWWA Section

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
AKA	1	1	*	*	*	*	*	*	*
ALA	1	1	*	*	*	*	*	*	*
ARI	4	5	*	*	*	*	*	*	*
ATC	1	1	*	*	*	*	*	*	*
BRC	0	0	*	*	*	*	*	*	*
CAL	10	12	*	\$43,206	\$44,653	\$44,801	\$37,507	\$43,960	\$51,686
CHS	1	1	*	*	*	*	*	*	*
CON	0	0	*	*	*	*	*	*	*
FLA	3	3	*	*	*	*	*	*	*
GEO	0	0	*	*	*	*	*	*	*
HWI	0	0	*	*	*	*	*	*	*
ILL	1	1	*	*	*	*	*	*	*
IND	5	8	*	\$31,200	\$33,323	\$34,504	*	*	*
INT	3	4	*	*	*	*	*	*	*
IWA	3	3	*	*	*	*	*	*	*
KAN	0	0	*	*	*	*	*	*	*
KNT	1	1	*	*	*	*	*	*	*
MIC	0	0	*	*	*	*	*	*	*
MIN	3	4	*	*	*	*	*	*	*
MOU	1	1	*	*	*	*	*	*	*
MTN	1	1	*	*	*	*	*	*	*
NDK	0	0	*	*	*	*	*	*	*
NEB	1	1	*	*	*	*	*	*	*
NEJ	0	0	*	*	*	*	*	*	*
NEW	2	2	*	*	*	*	*	*	*
NEY	0	0	*	*	*	*	*	*	*
NOC	2	2	*	*	*	*	*	*	*
OHO	1	2	*	*	*	*	*	*	*
ONT	0	0	*	*	*	*	*	*	*
PAC	1	1	*	*	*	*	*	*	*
PEN	3	3	*	*	*	*	*	*	*
PRT	0	0	*	*	*	*	*	*	*
RMT	2	1	*	*	*	*	*	*	*
RTM	0	0	*	*	*	*	*	*	*
SCR	1	2	*	*	*	*	*	*	*
SDK	0	0	*	*	*	*	*	*	*
SOW	2	2	*	*	*	*	*	*	*
TEX	5	5	*	\$32,448	\$30,596	\$30,596	*	*	*
VIR	0	0	*	*	*	*	*	*	*
WEV	0	0	*	*	*	*	*	*	*
WIS	3	6	*	*	*	*	*	*	*

American Water Works Association - Rural - 2016

Water Participants

Job R160 - Rural System Accounting Clerk

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	21	28	*	\$38,833	\$38,904	\$39,526	\$34,680	\$41,582	\$48,690
Board Operated	12	17	*	\$36,779	\$36,426	\$37,617	\$37,128	\$42,628	\$47,990
City/County	6	8	*	\$37,544	\$39,612	\$40,632	\$31,742	\$40,327	\$49,530
Private	1	1	*	*	*	*	*	*	*
Other	2	2	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	14	21	*	\$41,922	\$42,230	\$41,952	\$35,414	\$42,374	\$49,584
< 5,000	7	7	*	\$31,528	\$32,251	\$32,251	*	*	*

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	4	5	*	*	*	*	*	*	*
< 25	17	23	*	\$37,066	\$37,023	\$37,569	\$35,690	\$41,915	\$49,186

American Water Works Association - Rural - 2016

Job R160 - Rural System Accounting Clerk

Water/Waste Water Participants

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	41	46	*	\$40,125	\$39,700	\$40,477	\$33,037	\$39,787	\$47,307
Board Operated	22	26	*	\$43,028	\$42,257	\$43,019	\$34,799	\$42,861	\$51,672
City/County	16	17	*	\$34,263	\$36,270	\$37,010	\$31,671	\$37,536	\$44,102
Private	0	0	*	*	*	*	*	*	*
Other	3	3	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	18	20	*	\$41,400	\$41,643	\$42,324	\$34,663	\$41,161	\$47,998
< 5,000	23	26	*	\$38,400	\$38,264	\$39,056	\$30,396	\$37,553	\$46,186

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	5	7	*	\$45,148	\$44,096	\$43,944	\$32,822	\$39,547	\$46,988
< 25	36	39	*	\$39,551	\$39,072	\$39,855	\$32,822	\$39,547	\$46,988

American Water Works Association - Rural - 2016

All Participants

Job R180 - Rural System Receptionist

Responsible for answering phones, taking messages and greeting visitors. May be responsible for typing correspondence for the General Manager or other office staff or other clerical duties.

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	26	29	*	\$32,365	\$32,653	\$32,356	\$28,769	\$33,623	\$39,236
Board Operated	17	19	*	\$32,182	\$32,035	\$31,493	\$29,929	\$34,773	\$40,403
City/County	6	7	*	\$31,075	\$32,890	\$33,362	*	*	*
Private	2	2	*	*	*	*	*	*	*
Other	1	1	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	12	13	*	\$32,968	\$34,589	\$34,329	\$28,401	\$33,363	\$39,335
< 5,000	14	16	*	\$32,000	\$30,866	\$30,753	\$29,358	\$34,041	\$39,078

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	6	7	*	\$36,550	\$36,326	\$36,080	*	*	*
< 25	20	22	*	\$32,000	\$31,493	\$31,171	\$28,047	\$32,810	\$38,347

American Water Works Association - Rural - 2016

All Participants

Job R180 - Rural System Receptionist

Summary of All Reported Data by AWWA Section

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
AKA	0	0	*	*	*	*	*	*	*
ALA	0	0	*	*	*	*	*	*	*
ARI	2	2	*	*	*	*	*	*	*
ATC	0	0	*	*	*	*	*	*	*
BRC	0	0	*	*	*	*	*	*	*
CAL	4	3	*	*	*	*	*	*	*
CHS	0	0	*	*	*	*	*	*	*
CON	1	1	*	*	*	*	*	*	*
FLA	1	1	*	*	*	*	*	*	*
GEO	0	0	*	*	*	*	*	*	*
HWI	0	0	*	*	*	*	*	*	*
ILL	0	0	*	*	*	*	*	*	*
IND	2	2	*	*	*	*	*	*	*
INT	0	0	*	*	*	*	*	*	*
IWA	2	2	*	*	*	*	*	*	*
KAN	0	0	*	*	*	*	*	*	*
KNT	2	2	*	*	*	*	*	*	*
MIC	1	2	*	*	*	*	*	*	*
MIN	0	0	*	*	*	*	*	*	*
MOU	0	0	*	*	*	*	*	*	*
MTN	0	0	*	*	*	*	*	*	*
NDK	0	0	*	*	*	*	*	*	*
NEB	1	2	*	*	*	*	*	*	*
NEJ	0	0	*	*	*	*	*	*	*
NEW	1	2	*	*	*	*	*	*	*
NEY	0	0	*	*	*	*	*	*	*
NOC	1	2	*	*	*	*	*	*	*
OHO	2	2	*	*	*	*	*	*	*
ONT	0	0	*	*	*	*	*	*	*
PAC	0	0	*	*	*	*	*	*	*
PEN	1	1	*	*	*	*	*	*	*
PRT	0	0	*	*	*	*	*	*	*
RMT	2	2	*	*	*	*	*	*	*
RTM	0	0	*	*	*	*	*	*	*
SCR	0	0	*	*	*	*	*	*	*
SDK	0	0	*	*	*	*	*	*	*
SOW	1	1	*	*	*	*	*	*	*
TEX	1	1	*	*	*	*	*	*	*
VIR	0	0	*	*	*	*	*	*	*
WEV	0	0	*	*	*	*	*	*	*
WIS	1	1	*	*	*	*	*	*	*

American Water Works Association - Rural - 2016

Water Participants

Job R180 - Rural System Receptionist

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	11	12	*	\$32,365	\$33,260	\$33,088	\$28,589	\$32,550	\$36,383
Board Operated	8	9	*	\$32,182	\$32,362	\$32,233	\$29,565	\$33,178	\$36,641
City/County	1	1	*	*	*	*	*	*	*
Private	1	1	*	*	*	*	*	*	*
Other	1	1	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	7	8	*	\$33,571	\$34,624	\$34,196	*	*	*
< 5,000	4	4	*	*	*	*	*	*	*

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	2	2	*	*	*	*	*	*	*
< 25	9	10	*	\$32,000	\$31,373	\$31,356	\$28,107	\$32,120	\$35,959

American Water Works Association - Rural - 2016

Water/Waste Water Participants

Job R180 - Rural System Receptionist

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	15	17	*	\$30,653	\$32,177	\$31,839	\$28,924	\$34,543	\$41,682
Board Operated	9	10	*	\$30,653	\$31,709	\$30,827	\$30,293	\$36,368	\$44,166
City/County	5	6	*	\$28,579	\$32,754	\$33,327	*	*	*
Private	1	1	*	*	*	*	*	*	*
Other	0	0	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	5	5	*	\$28,831	\$34,541	\$34,541	*	*	*
< 5,000	10	12	*	\$32,475	\$30,863	\$30,713	*	*	*

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	4	5	*	*	*	*	*	*	*
< 25	11	12	*	\$30,653	\$31,601	\$31,017	\$27,988	\$33,499	\$40,734

American Water Works Association - Rural - 2016

All Participants

Job R190 - Rural System Field Manager (Field Crew Leader)

Responsible for all managerial tasks for the distribution and/or collection system, including human resource recommendations for field staff and the maintenance, repair and construction of facilities in the distribution and/or collection system. Must have a state operator's license or be directly supervised by a licensed operator.

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	76	88	4	\$56,000	\$57,407	\$57,358	\$47,958	\$56,496	\$66,319
Board Operated	40	46	4	\$60,991	\$60,690	\$59,227	\$50,015	\$58,506	\$69,723
City/County	31	37	6	\$51,947	\$52,736	\$54,612	\$44,899	\$52,889	\$60,655
Private	2	2	*	*	*	*	*	*	*
Other	3	3	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	45	54	5	\$58,344	\$60,460	\$60,309	\$48,475	\$57,186	\$66,385
< 5,000	31	34	4	\$53,464	\$53,031	\$52,671	\$47,070	\$55,312	\$66,207

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	10	13	8	\$66,593	\$67,488	\$68,286	\$54,398	\$65,010	\$76,831
< 25	66	75	3	\$54,640	\$55,807	\$55,464	\$46,982	\$55,206	\$64,726

American Water Works Association - Rural - 2016

All Participants

Job R190 - Rural System Field Manager (Field Crew Leader)

Summary of All Reported Data by AWWA Section

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
AKA	1	1	*	*	*	*	*	*	*
ALA	1	1	*	*	*	*	*	*	*
ARI	3	4	*	*	*	*	*	*	*
ATC	0	0	*	*	*	*	*	*	*
BRC	1	1	*	*	*	*	*	*	*
CAL	12	13	4	\$66,435	\$66,930	\$66,543	\$53,878	\$63,527	\$74,577
CHS	0	0	*	*	*	*	*	*	*
CON	0	0	*	*	*	*	*	*	*
FLA	2	2	*	*	*	*	*	*	*
GEO	0	0	*	*	*	*	*	*	*
HWI	0	0	*	*	*	*	*	*	*
ILL	1	1	*	*	*	*	*	*	*
IND	5	7	*	\$43,680	\$45,344	\$43,817	*	*	*
INT	4	4	*	*	*	*	*	*	*
IWA	1	1	*	*	*	*	*	*	*
KAN	1	1	*	*	*	*	*	*	*
KNT	2	2	*	*	*	*	*	*	*
MIC	4	4	*	*	*	*	*	*	*
MIN	1	1	*	*	*	*	*	*	*
MOU	1	1	*	*	*	*	*	*	*
MTN	0	0	*	*	*	*	*	*	*
NDK	0	0	*	*	*	*	*	*	*
NEB	2	2	*	*	*	*	*	*	*
NEJ	0	0	*	*	*	*	*	*	*
NEW	4	3	*	*	*	*	*	*	*
NEY	1	1	*	*	*	*	*	*	*
NOC	2	3	*	*	*	*	*	*	*
OHO	2	2	*	*	*	*	*	*	*
ONT	0	0	*	*	*	*	*	*	*
PAC	8	10	4	\$64,292	\$61,141	\$65,632	*	*	*
PEN	2	5	*	*	*	*	*	*	*
PRT	0	0	*	*	*	*	*	*	*
RMT	4	5	*	*	*	*	*	*	*
RTM	0	0	*	*	*	*	*	*	*
SCR	1	1	*	*	*	*	*	*	*
SDK	0	0	*	*	*	*	*	*	*
SOW	1	1	*	*	*	*	*	*	*
TEX	6	8	3	\$53,131	\$53,379	\$52,550	*	*	*
VIR	0	0	*	*	*	*	*	*	*
WEV	0	0	*	*	*	*	*	*	*
WIS	3	3	*	*	*	*	*	*	*

American Water Works Association - Rural - 2016

Water Participants

Job R190 - Rural System Field Manager (Field Crew Leader)

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	28	29	3	\$58,989	\$59,412	\$59,654	\$50,938	\$60,552	\$70,147
Board Operated	17	18	3	\$65,000	\$59,861	\$60,227	\$51,975	\$59,582	\$68,412
City/County	7	7	5	\$56,618	\$58,354	\$58,354	*	*	*
Private	1	1	*	*	*	*	*	*	*
Other	3	3	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	20	21	4	\$65,000	\$60,989	\$61,249	\$49,981	\$60,631	\$71,254
< 5,000	8	8	2	\$53,464	\$55,470	\$55,470	*	*	*

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	3	3	*	*	*	*	*	*	*
< 25	25	26	3	\$56,000	\$57,747	\$58,081	\$49,544	\$58,580	\$67,616

American Water Works Association - Rural - 2016

Water/Waste Water Participants

Job R190 - Rural System Field Manager (Field Crew Leader)

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	48	59	5	\$55,000	\$56,159	\$56,229	\$46,014	\$53,850	\$63,823
Board Operated	23	28	4	\$60,320	\$61,360	\$58,585	\$48,545	\$57,699	\$70,705
City/County	24	30	6	\$50,000	\$51,027	\$53,739	\$43,254	\$49,651	\$56,315
Private	1	1	*	*	*	*	*	*	*
Other	0	0	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	25	33	5	\$58,000	\$60,000	\$59,711	\$47,201	\$54,271	\$62,265
< 5,000	23	26	4	\$51,947	\$52,145	\$51,810	\$44,472	\$53,303	\$65,849

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	7	10	9	\$68,186	\$65,001	\$66,784	*	*	*
< 25	41	49	4	\$54,320	\$54,531	\$54,075	\$45,317	\$53,012	\$62,848

American Water Works Association - Rural - 2016

All Participants

Job R200 - Rural System Maintenance Technician

Responsible for planning, scheduling and performing preventative and regular maintenance work. May hold a state operator's license or operate water and wastewater components under the supervision of a licensed operator. Must possess strong working knowledge of line maintenance, valves, meters, chemicals, controls and other treatment procedures.

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	58	125	4	\$47,000	\$47,467	\$49,196	\$40,504	\$47,603	\$55,454
Board Operated	33	64	*	\$50,000	\$48,752	\$48,884	\$42,363	\$49,724	\$58,147
City/County	19	52	4	\$45,000	\$45,857	\$49,656	\$38,357	\$44,608	\$51,232
Private	2	2	*	*	*	*	*	*	*
Other	4	7	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	34	82	3	\$50,000	\$49,513	\$51,112	\$41,828	\$48,650	\$56,133
< 5,000	24	43	*	\$45,000	\$44,620	\$45,542	\$37,977	\$45,602	\$54,159

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	11	35	*	\$50,000	\$55,299	\$55,826	\$47,075	\$54,597	\$62,907
< 25	47	90	3	\$46,280	\$45,509	\$46,617	\$38,988	\$45,988	\$53,735

American Water Works Association - Rural - 2016

All Participants

Job R200 - Rural System Maintenance Technician

Summary of All Reported Data by AWWA Section

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
AKA	1	1	*	*	*	*	*	*	*
ALA	0	0	*	*	*	*	*	*	*
ARI	2	5	*	*	*	*	*	*	*
ATC	0	0	*	*	*	*	*	*	*
BRC	0	0	*	*	*	*	*	*	*
CAL	10	23	*	\$52,634	\$53,755	\$53,703	\$44,198	\$53,455	\$63,945
CHS	0	0	*	*	*	*	*	*	*
CON	0	0	*	*	*	*	*	*	*
FLA	1	1	*	*	*	*	*	*	*
GEO	0	0	*	*	*	*	*	*	*
HWI	0	0	*	*	*	*	*	*	*
ILL	0	0	*	*	*	*	*	*	*
IND	1	5	*	*	*	*	*	*	*
INT	2	3	*	*	*	*	*	*	*
IWA	2	2	*	*	*	*	*	*	*
KAN	0	0	*	*	*	*	*	*	*
KNT	1	1	*	*	*	*	*	*	*
MIC	4	4	*	*	*	*	*	*	*
MIN	0	0	*	*	*	*	*	*	*
MOU	0	0	*	*	*	*	*	*	*
MTN	0	0	*	*	*	*	*	*	*
NDK	0	0	*	*	*	*	*	*	*
NEB	2	7	*	*	*	*	*	*	*
NEJ	0	0	*	*	*	*	*	*	*
NEW	4	8	*	*	*	*	*	*	*
NEY	0	0	*	*	*	*	*	*	*
NOC	2	8	*	*	*	*	*	*	*
NYO	0	0	*	*	*	*	*	*	*
OHO	0	0	*	*	*	*	*	*	*
ONT	0	0	*	*	*	*	*	*	*
PAC	7	26	*	\$60,000	\$60,059	\$62,472	*	*	*
PEN	4	4	*	*	*	*	*	*	*
PRT	0	0	*	*	*	*	*	*	*
RMT	4	3	*	*	*	*	*	*	*
RTM	0	0	*	*	*	*	*	*	*
SCR	0	0	*	*	*	*	*	*	*
SDK	1	4	*	*	*	*	*	*	*
SOW	2	2	*	*	*	*	*	*	*
TEX	5	10	*	\$39,000	\$36,913	\$33,058	*	*	*
VIR	0	0	*	*	*	*	*	*	*
WEV	0	0	*	*	*	*	*	*	*
WIS	2	8	*	*	*	*	*	*	*

American Water Works Association - Rural - 2016

Water Participants

Job R200 - Rural System Maintenance Technician

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	21	43	*	\$51,781	\$52,037	\$50,781	\$45,628	\$53,860	\$62,520
Board Operated	15	31	*	\$52,634	\$50,999	\$49,903	\$45,602	\$53,167	\$61,343
City/County	2	5	*	*	*	*	*	*	*
Private	1	1	*	*	*	*	*	*	*
Other	3	6	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	15	34	*	\$50,710	\$51,215	\$49,473	\$45,277	\$52,334	\$59,925
< 5,000	6	9	*	\$55,891	\$54,092	\$55,720	*	*	*

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	3	3	*	*	*	*	*	*	*
< 25	18	40	*	\$51,246	\$49,983	\$49,762	\$42,854	\$51,053	\$60,113

American Water Works Association - Rural - 2016

Water/Waste Water Participants

Job R200 - Rural System Maintenance Technician

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	37	82	4	\$45,006	\$44,644	\$48,365	\$38,175	\$44,758	\$52,243
Board Operated	18	33	*	\$46,490	\$46,769	\$47,927	\$40,302	\$47,533	\$56,114
City/County	17	47	4	\$43,000	\$43,706	\$49,300	\$36,154	\$42,181	\$48,659
Private	1	1	*	*	*	*	*	*	*
Other	1	1	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	19	48	*	\$50,000	\$48,012	\$52,273	\$39,706	\$46,384	\$53,799
< 5,000	18	34	*	\$43,181	\$41,276	\$42,847	\$35,965	\$42,410	\$49,994

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	8	32	*	\$48,245	\$51,902	\$55,026	*	*	*
< 25	29	50	*	\$43,999	\$42,411	\$44,102	\$37,270	\$43,737	\$50,900

American Water Works Association - Rural - 2016

All Participants

Job R210 - Rural System Laborer (Utility Service Worker)

Responsible for grounds maintenance, system repairs, excavation equipment operation and meter installation and replacement. Must maintain a state operator's license or be directly supervised by a licensed operator.

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	75	199	*	\$37,950	\$40,986	\$40,590	\$35,786	\$41,873	\$49,099
Board Operated	37	89	*	\$39,375	\$41,396	\$42,910	\$37,347	\$43,674	\$51,859
City/County	34	100	*	\$37,472	\$40,958	\$38,193	\$34,347	\$40,069	\$46,078
Private	1	1	*	*	*	*	*	*	*
Other	3	9	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	37	97	*	\$45,250	\$44,993	\$44,711	\$38,028	\$44,175	\$51,178
< 5,000	38	102	*	\$36,169	\$37,201	\$36,672	\$32,600	\$38,600	\$46,145

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	12	33	*	\$50,000	\$47,724	\$45,507	\$41,607	\$48,421	\$55,567
< 25	63	166	*	\$37,066	\$39,730	\$39,613	\$34,560	\$40,494	\$47,738

American Water Works Association - Rural - 2016

All Participants

Job R210 - Rural System Laborer (Utility Service Worker)

Summary of All Reported Data by AWWA Section

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
AKA	1	2	*	*	*	*	*	*	*
ALA	0	0	*	*	*	*	*	*	*
ARI	4	10	*	*	*	*	*	*	*
ATC	0	0	*	*	*	*	*	*	*
BRC	0	0	*	*	*	*	*	*	*
CAL	9	24	*	\$50,000	\$47,654	\$50,536	\$40,272	\$48,070	\$56,485
CHS	0	0	*	*	*	*	*	*	*
CON	0	0	*	*	*	*	*	*	*
FLA	1	6	*	*	*	*	*	*	*
GEO	0	0	*	*	*	*	*	*	*
HWI	0	0	*	*	*	*	*	*	*
ILL	1	2	*	*	*	*	*	*	*
IND	3	11	*	*	*	*	*	*	*
INT	3	13	*	*	*	*	*	*	*
IWA	3	3	*	*	*	*	*	*	*
KAN	0	0	*	*	*	*	*	*	*
KNT	3	4	*	*	*	*	*	*	*
MIC	6	20	*	\$37,200	\$41,625	\$38,200	*	*	*
MIN	2	5	*	*	*	*	*	*	*
MOU	1	2	*	*	*	*	*	*	*
MTN	0	0	*	*	*	*	*	*	*
NDK	0	0	*	*	*	*	*	*	*
NEB	1	1	*	*	*	*	*	*	*
NEJ	0	0	*	*	*	*	*	*	*
NEW	3	9	*	*	*	*	*	*	*
NEY	1	4	*	*	*	*	*	*	*
NOC	2	6	*	*	*	*	*	*	*
OHO	4	9	*	*	*	*	*	*	*
ONT	0	0	*	*	*	*	*	*	*
PAC	6	11	*	\$46,611	\$50,017	\$49,990	*	*	*
PEN	3	8	*	*	*	*	*	*	*
PRT	0	0	*	*	*	*	*	*	*
RMT	2	1	*	*	*	*	*	*	*
RTM	0	0	*	*	*	*	*	*	*
SCR	0	0	*	*	*	*	*	*	*
SDK	0	0	*	*	*	*	*	*	*
SOW	5	30	*	\$27,300	\$28,750	\$27,273	*	*	*
TEX	6	13	*	\$27,248	\$29,384	\$32,591	\$27,896	\$34,890	\$43,777
VIR	0	0	*	*	*	*	*	*	*
WEV	0	0	*	*	*	*	*	*	*
WIS	4	5	*	*	*	*	*	*	*

American Water Works Association - Rural - 2016

Water Participants

Job R210 - Rural System Laborer (Utility Service Worker)

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	24	57	*	\$42,653	\$42,017	\$43,747	\$36,984	\$42,455	\$49,126
Board Operated	14	33	*	\$42,653	\$42,210	\$43,528	\$38,822	\$43,284	\$49,900
City/County	7	16	*	\$45,434	\$43,572	\$43,405	*	*	*
Private	1	1	*	*	*	*	*	*	*
Other	2	7	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	13	34	*	\$46,400	\$45,603	\$48,716	\$39,054	\$45,267	\$52,879
< 5,000	11	23	*	\$36,338	\$38,105	\$36,401	\$32,842	\$36,830	\$41,618

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	4	13	*	*	*	*	*	*	*
< 25	20	44	*	\$37,044	\$39,424	\$41,619	\$34,807	\$39,991	\$46,654

American Water Works Association - Rural - 2016

Water/Waste Water Participants

Job R210 - Rural System Laborer (Utility Service Worker)

Summary of All Reported Data by Ownership/Management Type

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
All	51	142	*	\$37,900	\$40,482	\$39,323	\$35,206	\$41,591	\$49,087
Board Operated	23	56	*	\$38,750	\$40,892	\$42,546	\$36,363	\$43,934	\$53,164
City/County	27	84	*	\$36,400	\$40,226	\$37,201	\$34,071	\$39,488	\$45,507
Private	0	0	*	*	*	*	*	*	*
Other	1	2	*	*	*	*	*	*	*

Summary of All Reported Data by Population Size

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
5,000 - 9,999	24	63	*	\$44,285	\$44,661	\$42,549	\$37,424	\$43,533	\$50,177
< 5,000	27	79	*	\$36,000	\$36,804	\$36,751	\$32,514	\$39,233	\$47,762

Summary of All Reported Data by Total Employment

Scope	# of Utilities	# of Employees	Avg. # of Ees Sup	50th Percentile	Co Wtd Avg Pay	Employee Wtd Avg Pay	Average Salary Range		
							Min	Mid	Max
Over 1,000	0	0	*	*	*	*	*	*	*
500 - 1,000	0	0	*	*	*	*	*	*	*
200 - 500	0	0	*	*	*	*	*	*	*
100 - 200	0	0	*	*	*	*	*	*	*
50 - 100	0	0	*	*	*	*	*	*	*
25 - 50	8	20	*	\$35,360	\$43,947	\$41,970	\$39,157	\$46,087	\$53,498
< 25	43	122	*	\$37,950	\$39,875	\$38,889	\$34,447	\$40,726	\$48,238

TAB 24 (UPDATED 09/20/2017)

Comparison of Water District Wages with State and National Water Industry Wages/Salaries Rates

Position	Total Adjusted Pay	AWWA Guide Position	AWWA-50th Percentile	AWWA-Mid Average Salary	KRWA Position	KRWA Average
General Manager	\$57,528.34	Rural System General Mgr	\$81,120.00	\$84,708.00	Manager/Superintendent	\$64,063
Office Manager	\$50,658.23	Rural System Office Mgr	\$48,256.00	\$62,976.00	Office Manager	\$50,033
Distribution Crew Supervisor	\$51,621.50	Rural System Field Manager	\$56,000.00	\$58,506.00	Supervisor	\$46,522
Accounts Receivable III	\$34,007.02	Rural System Bookkeeper	\$47,966.00	\$58,126.00	Bookkeeper	\$35,394
Customer Service Rep Supervisor	\$41,790.88	Rural System Receptionist	\$32,365.00	\$34,773.00	Customer Service Rep	\$30,142
Meter Tester/Equipment Operator II	\$42,158.73	Rural System Maintenance Technician	\$47,000.00	\$47,603.00	Non-Certified Field Personnel	\$30,244
Laborer II	\$30,597.88	Rural System Laborer	\$37,950.00	\$41,873.00	Non-Certified Field Personnel	\$30,244
Accounts Receivable II	\$26,269.45	Rural System Accounting Clerk	\$38,833.00	\$41,582.00	Bookkeeper	\$35,394
Laborer I	\$26,420.04	Rural System Laborer	\$37,950.00	\$41,873.00	Non-Certified Field Personnel	\$30,244
Accounts Receivable I	\$22,276.80	Rural System Accounting Clerk	\$38,833.00	\$41,582.00	Bookkeeper	\$35,394

Sources: 2016 AWWA Water Utility Compensation Survey: Rural Water and Wastewater Utilities (American Water Works Assn. Oct. 2016); 2017 KRWA Compensation and Benefit Results (Kentucky Rural Water Association May 25, 2017)

Employee Benefits Offered By Kentucky Rural Water Utilities

All Utilities	Percentage
Health Insurance	88
Life Insurance	68
Retirement	83
Vacation	95
Sick Pay	90
Incentive Pay	15

Utilities (2500 - 5999 Connections)	Percentage
Health Insurance	100
Life Insurance	80
Retirement	95
Vacation	98
Sick Pay	95
Incentive Pay	13

Source: 2017 KRWA Compensation and Benefit Results (Kentucky Rural Water Association May 25, 2017)



GERALD WUETCHER
DIRECT DIAL: (859) 231-3017
DIRECT FAX: (859) 258-3517
gerald.wuetcher@skofirm.com

2000 PNC PLAZA
500 WEST JEFFERSON STREET
LOUISVILLE, KY 40202-2828
MAIN: (502) 333-6000
FAX: (502) 333-6099

January 4, 2017

Mr. Mark Williams
Monroe County Water District
205 Capp Harlan Road
Tompkinsville, Kentucky 42167

***Re: Monroe County Water District; Engagement for Legal Services
2017 Application for Rate Adjustment***

Dear Mr. Williams:

Stoll Keenon Ogden PLLC (“SKO”) is pleased to again serve as legal counsel to Monroe County Water District (“Monroe District”). The purposes of this letter are to acknowledge Monroe District’s retention of SKO as to this specific matter and to reaffirm the basic terms of our representation.

SKO is engaged to prepare and file Monroe District’s application for rate adjustment with the Kentucky Public Service Commission (“KPSC”) and to represent Monroe District in any proceedings arising from that application. The application will be filed under the KPSC’s alternative rate filing procedures in early 2017. Monroe District has already executed a Master Engagement Letter, dated January 23, 2015, which sets forth the basic terms of SKO’s representation of Monroe District, including certain rights and obligations of Monroe District and of SKO, and the advance conflict waiver provisions that Monroe District has accepted. Please advise if you require a copy of that Letter.

I will serve as the attorney primarily responsible for representing Monroe District’s interests in this matter. It is possible that additional attorneys or paralegals will also work on these matters as well. Any significant use of other SKO personnel, however, would be made only after consultation with Monroe District. My standard billing rate is currently \$315 per hour. In recognition of the size of Monroe District’s operations, I will provide a 25 percent discount on that rate, which equates to an hourly rate of \$237 for my services. The 25 percent discount will also apply to the standard hourly rates of other attorneys in our firm. For the first phase of the engagement, which involves the preparation and filing of Monroe District’s application with the KPSC, Monroe District will be billed no more than \$2,500 for work that I or other SKO attorneys performed. Any services performed in the second phase of the engagement, which involves representation of Monroe District before the KPSC after the filing of the application and the issuance of a KPSC Staff Report on that application, will be billed on an hourly basis.

Mr. Mark Williams
January 4, 2017
Page 2

SKO is honored to again represent Monroe District. Please call me if you have any questions or if you have any different understanding of SKO's representation of Monroe District.

Very truly yours,

Stoll Keenon Ogden PLLC

Gerald Wuetcher

GEW

Agreed and accepted:

MONROE COUNTY WATER DISTRICT

By: Mark Williams

Title: Chairman

Date: 1-9-2017

STOLL · KEENON · OGDEN
PLLC
2000 PNC Plaza
500 West Jefferson Street
Louisville, Kentucky 40202-2828
502 333-6000
Tax ID # 61-0421389
February 16, 2017

Monroe County Water District
205 Capp Harlan Road
Tompkinsville, KY 42167

INVOICE NO.: 850154
SKO File No.: 118811/156268

Please Remit This Page With Payment To:
STOLL · KEENON · OGDEN
PLLC
P.O. Box 11969
Lexington, Kentucky 40579-1969

Re: 2017 Rate Case

Our Reference: 118811/156268/GEW/2404

Fees rendered this bill \$ 408.00

Total Current Charges This Matter \$ 408.00

STOLL · KEENON · OGDEN
PLLC
2000 PNC Plaza
500 West Jefferson Street
Louisville, Kentucky 40202-2828
502 333-6000
Tax ID # 61-0421389

February 16, 2017

Monroe County Water District
205 Capp Harlan Road
Tompkinsville, KY 42167

INVOICE NO.: 850154
SKO File No.: 118811/156268

MATTER NAME: 2017 Rate Case

TOTAL FEES FOR PROFESSIONAL SERVICES PER ATTACHED	544.00
<i>COURTESY REDUCTION</i>	<i>(136.00)</i>
TOTAL CHARGES FOR EXPENSES AND OTHER SERVICES PER ATTACHED	<u>0.00</u>
INVOICE TOTAL	<u>\$ 408.00</u>
TOTAL BALANCE DUE	<u><u>\$408.00</u></u>

*PLEASE INDICATE INVOICE NUMBER 850154 ON PAYMENT

BILL DATE: February 16, 2017

Monroe County Water District
205 Capp Harlan Road
Tompkinsville, KY 42167

LEGAL FEES

DATE	IND	DESCRIPTION OF SERVICE	HOURS	RATE	AMOUNT
01/04/17	GEW	Prepare for client a list of documents necessary for rate application	1.30	320.00	\$ 416.00
01/06/17	GEW	Telephone call with M. Melton Re: Propose rate case application	0.40	320.00	128.00
01/09/17	GEW	Initial calculation of rate adjustment	0.60	0.00	0.00
01/19/17	GEW	Respond to J. Dubree inquiry re: rate case documents	0.10	0.00	0.00
01/23/17	GEW	Emails to J. Dupree & M. Melton regarding billing analysis	0.10	0.00	0.00
SUBTOTAL			2.50		\$544.00

EXPENSES AND OTHER SERVICES

***note: all copies are billed at .10/page unless otherwise indicated*

DATE	DESCRIPTION	AMOUNT
SUBTOTAL		0.00
GRAND TOTAL:		\$408.00

ATTORNEY/PARALEGAL SUMMARY

TIMEKEEPER	RANK	HOURS	RATE	AMOUNT
G. E Wuetcher	Of Counsel	2.50	217.60	\$544.00

STOLL · KEENON · OGDEN
PLLC
2000 PNC Plaza
500 West Jefferson Street
Louisville, Kentucky 40202-2828
502 333-6000
Tax ID # 61-0421389
April 19, 2017

Monroe County Water District
205 Capp Harlan Road
Tompkinsville, KY 42167

INVOICE NO.: 853438
SKO File No.: 118811/156268

MATTER NAME: 2017 Rate Case

TOTAL FEES FOR PROFESSIONAL SERVICES PER ATTACHED 26,296.50

Adjustment pursuant to Engagement Agreement (24,204.50)

TOTAL CHARGES FOR EXPENSES AND OTHER SERVICES PER ATTACHED 0.00

INVOICE TOTAL \$ 2,092.00

TOTAL BALANCE DUE \$2,092.00

STOLL · KEENON · OGDEN
PLLC
2000 PNC Plaza
500 West Jefferson Street
Louisville, Kentucky 40202-2828
502 333-6000
Tax ID # 61-0421389

April 19, 2017

Monroe County Water District
205 Capp Harlan Road
Tompkinsville, KY 42167

INVOICE NO.: 853438
SKO File No.: 118811/156268

MATTER NAME: 2017 Rate Case

TOTAL FEES FOR PROFESSIONAL SERVICES PER ATTACHED	26,296.50
<i>Adjustment pursuant to Engagement Agreement</i>	<i>(24,204.50)</i>
TOTAL CHARGES FOR EXPENSES AND OTHER SERVICES PER ATTACHED	<u>0.00</u>
INVOICE TOTAL	<u>\$ 2,092.00</u>
TOTAL BALANCE DUE	<u><u>\$2,092.00</u></u>

BILL DATE: April 19, 2017

Monroe County Water District
205 Capp Harlan Road
Tompkinsville, KY 42167

LEGAL FEES

DATE	IND	DESCRIPTION OF SERVICE	HOURS	RATE	AMOUNT
02/01/17	GEW	Telephone call to S. Reid Re: preparation of revenue tables for ARF application	0.20	235.00	\$ 47.00
02/01/17	GEW	Prepare rate case application	2.00	235.00	470.00
02/02/17	GEW	Telephone call to PSC annual reports branch Re: Monroe County Water District's 2015 annual report	0.20	235.00	47.00
02/02/17	GEW	E-mail to J. Dubree & M. Melton re: non recurring charges	0.50	235.00	117.50
02/02/17	GEW	Prepare application for rate adjustment	2.70	235.00	634.50
02/03/17	GEW	Prepare rate case application	6.00	235.00	1,410.00
02/06/17	GEW	Confer by telephone with Brent Billingsley Re: 2015 audit report and documents necessary for rate application	0.20	235.00	47.00
02/06/17	GEW	Confer by telephone with Melissa Melton Re: rate application	1.20	235.00	282.00
02/06/17	GEW	Prepare rate case application	3.20	235.00	752.00
02/07/17	GEW	Prepare rate case application	6.40	235.00	1,504.00
02/08/17	GEW	Prepare rate case application	5.50	235.00	1,292.50
02/09/17	GEW	Confer by telephone with M. Melton Re: rate case application	0.70	235.00	164.50
02/09/17	GEW	Prepare rate case application	5.00	235.00	1,175.00
02/17/17	GEW	Prepare rate case application	1.50	235.00	352.50
02/20/17	GEW	Prepare rate case application	6.50	235.00	1,527.50
02/21/17	GEW	Prepare rate case application; confer with M. Melton re: application status	4.70	235.00	1,104.50

DATE	IND	DESCRIPTION OF SERVICE	HOURS	RATE	AMOUNT
02/22/17	GEW	Prepare rate case application	5.00	235.00	1,175.00
02/23/17	GEW	Prepare rate case application	1.00	235.00	235.00
02/24/17	GEW	Prepare rate case application	4.00	235.00	940.00
02/27/17	GEW	Prepare rate case application	1.00	235.00	235.00
02/28/17	GEW	Prepare rate case application	1.00	235.00	235.00
03/01/17	GEW	Prepare rate case application	9.00	235.00	2,115.00
03/02/17	GEW	Confer by telephone with M. Melton re: rate application	0.40	235.00	94.00
03/03/17	GEW	Prepare rate case application	3.00	235.00	705.00
03/06/17	GEW	Prepare rate case application	1.00	235.00	235.00
03/07/17	GEW	Prepare rate case application	6.00	235.00	1,410.00
03/08/17	GEW	Prepare rate case application	2.50	235.00	587.50
03/09/17	GEW	Prepare rate case application	2.50	235.00	587.50
03/13/17	GEW	Confer by telephone with M. Melton	1.00	235.00	235.00
03/13/17	GEW	Prepare rate case application	4.00	235.00	940.00
03/14/17	GEW	Prepare rate case application	5.00	235.00	1,175.00
03/15/17	GEW	Prepare rate case application	7.00	235.00	1,645.00
03/16/17	GEW	Complete application and file with PSC	12.00	235.00	2,820.00
SUBTOTAL			111.90		\$26,296.50

ATTORNEY/PARALEGAL SUMMARY

TIMEKEEPER	RANK	HOURS	RATE	AMOUNT
G. E Wuetcher	Of Counsel	111.90	235.00	\$26,296.50

Table 10. Medical care benefits: Share of premiums paid by employer and employee, private industry workers, March 2016

(In percent)

Characteristics	Single coverage		Family coverage	
	Employer share	Employee share	Employer share	Employee share
All workers	79	21	68	32
Worker characteristics				
Management, professional, and related	80	20	69	31
Management, business, and financial	80	20	70	30
Professional and related	80	20	68	32
Service	80	20	64	36
Protective service	83	17	72	28
Sales and office	77	23	65	35
Sales and related	75	25	63	37
Office and administrative support	78	22	66	34
Natural resources, construction, and maintenance	80	20	69	31
Construction, extraction, farming, fishing, and forestry	81	19	68	32
Installation, maintenance, and repair	79	21	69	31
Production, transportation, and material moving ...	80	20	71	29
Production	79	21	71	29
Transportation and material moving	81	19	71	29
Full time	79	21	68	32
Part time	77	23	63	37
Union	87	13	83	17
Nonunion	78	22	65	35
Average wage within the following categories: ¹				
Lowest 25 percent	76	24	62	38
Lowest 10 percent	75	25	62	38
Second 25 percent	78	22	64	36
Third 25 percent	80	20	68	32
Highest 25 percent	81	19	72	28
Highest 10 percent	81	19	73	27
Establishment characteristics				
Goods-producing industries	80	20	72	28
Construction	82	18	68	32
Manufacturing	80	20	74	26
Service-providing industries	79	21	67	33
Trade, transportation, and utilities	78	22	66	34
Wholesale trade	79	21	69	31
Retail trade	74	26	60	40
Transportation and warehousing	82	18	72	28
Utilities	84	16	77	23

See footnotes at end of table.

Table 10. Medical care benefits: Share of premiums paid by employer and employee, private industry workers, March 2016—continued

(In percent)

Characteristics	Single coverage		Family coverage	
	Employer share	Employee share	Employer share	Employee share
Information	81	19	77	23
Financial activities	79	21	69	31
Finance and insurance	79	21	72	28
Credit intermediation and related activities	79	21	70	30
Insurance carriers and related activities	80	20	74	26
Real estate and rental and leasing	76	24	60	40
Professional and business services	78	22	64	36
Professional and technical services	82	18	68	32
Administrative and waste services	72	28	56	44
Education and health services	79	21	64	36
Educational services	80	20	66	34
Junior colleges, colleges, and universities	80	20	71	29
Health care and social assistance	79	21	64	36
Leisure and hospitality	83	17	72	28
Accommodation and food services	80	20	70	30
Other services	85	15	66	34
1 to 99 workers	79	21	64	36
1 to 49 workers	80	20	64	36
50 to 99 workers	77	23	63	37
100 workers or more	79	21	71	29
100 to 499 workers	78	22	67	33
500 workers or more	80	20	75	25
Geographic areas				
Northeast	81	19	73	27
New England	79	21	71	29
Middle Atlantic	82	18	74	26
South	78	22	63	37
South Atlantic	77	23	65	35
East South Central	78	22	65	35
West South Central	78	22	60	40
Midwest	78	22	69	31
East North Central	78	22	70	30
West North Central	79	21	67	33
West	82	18	69	31
Mountain	80	20	68	32
Pacific	82	18	69	31

¹ Surveyed occupations are classified into wage categories based on the average wage for the occupation, which may include workers with earnings both above and below the threshold. The categories were formed using percentile estimates generated using wage data for March 2016.

Note: Because of rounding, sums of individual items may not equal totals. For definitions of major plans, key provisions, and related terms, see the "Glossary of Employee Benefit Terms" at www.bls.gov/ncs/ebs/glossary20152016.htm.

Source: Bureau of Labor Statistics, National Compensation Survey.

System No.	S	Description	Date In Service	Method / Conv.	Life	Cost / Other Basis	
DISTRIBUTION RESERVOIRS							
9		Distribution rese	8/1/1989	SL / N/A	50.0000	137,201.00	
10		Gamaliel water t	5/15/2003	SL / N/A	50.0000	397,234.16	
66		Distribution rese	1/1/2004	SL / N/A	50.0000	494,195.00	
77		Distribution Res	6/1/2006	MSL / MM	50.0000	1,194.00	
83		Distribution Res	6/1/2007	MSL / MM	50.0000	610.00	
91		Distribution Res	6/1/2008	SL / N/A	50.0000	2,014.00	
99		Distribution Res	6/1/2009	SL / N/A	50.0000	560.00	
105		Distribution Res	6/1/2010	SL / N/A	50.0000	572.00	
110		Distribution Res	6/1/2011	SL / N/A	45.0000	539.00	
117		Distribution Res	6/1/2012	SL / N/A	45.0000	706,432.00	
121		Distribution Res	6/1/2013	SL / N/A	45.0000	1,383.00	
131		Distribution Res	6/1/2015	SL / N/A	45.0000	18,440.00	
136		Distribution Res	6/1/2016	SL / N/A	45.0000	607,282.00	
Subtotal: DISTRIBUTION RESERVOIRS						2,367,656.16	
Less dispositions and exchanges:							0.00
Net for: DISTRIBUTION RESERVOIRS						2,367,656.16	
LAND							
1		Land and land ri	7/1/1978	No Calc / N/A	0.0000	96,813.00	
2		Land - Lot Gami	11/15/2002	No Calc / N/A	0.0000	15,000.00	
3		Land - Lot coun	11/5/2002	No Calc / N/A	0.0000	15,029.00	
135		Land	6/1/2016	No Calc / N/A	0.0000	123,000.00	
Subtotal: LAND						249,842.00	
Less dispositions and exchanges:							0.00
Net for: LAND						249,842.00	
METERS & INSTALATIONS							
33		Meters and Inst	11/1/1998	SL / N/A	50.0000	361,584.00	
34		95 Meter set	12/31/2003	SL / N/A	50.0000	25,650.00	
61		Meter boxes, va	1/1/2004	SL / N/A	50.0000	33,658.00	
72		Meters and Inst	6/1/2005	MSL / N/A	50.0000	34,712.00	
79		Meters and Inst	6/1/2006	MSL / MM	50.0000	64,871.00	
85		Meters and Inst	6/1/2007	MSL / MM	50.0000	67,096.00	
93		Meters and Inst	6/1/2008	SL / N/A	50.0000	31,891.00	
101		Meters and Inst	6/1/2009	SL / N/A	50.0000	48,298.00	
107		Meters and Inst	6/1/2010	SL / N/A	50.0000	38,264.00	
112		Meters and Inst	6/1/2011	SL / N/A	40.0000	29,076.00	
119		Meters and Inst	6/1/2012	SL / N/A	40.0000	33,416.00	
124		Meters and Inst	6/1/2013	SL / N/A	40.0000	47,189.00	
127		Meters and Inst	6/1/2014	SL / N/A	40.0000	64,463.00	
133		Meters and Inst	6/1/2015	SL / N/A	40.0000	47,939.00	
138		Meters and Inst	6/1/2016	SL / N/A	40.0000	49,253.00	
Subtotal: METERS & INSTALATIONS						977,360.00	
Less dispositions and exchanges:							0.00
Net for: METERS & INSTALATIONS						977,360.00	0.0
OFFICE FURNITURE & EQUIPMENT							
37		Office equipmen	9/1/1987	SL / N/A	10.0000	17,172.00	
38		Kitchen Equipen	6/18/1999	SL / N/A	10.0000	1,485.00	
39		computer syste	11/24/1999	SL / N/A	10.0000	26,482.95	
40		Telephone syste	7/1/1999	SL / N/A	10.0000	2,841.00	
41		furniture	6/30/1999	SL / N/A	10.0000	6,592.70	
42		Lettering on buil	10/30/1999	SL / N/A	10.0000	478.00	
43		sharp copier al 1	7/2/2002	SL / N/A	10.0000	1,475.00	
44		compaq compu	8/13/2002	SL / N/A	10.0000	5,691.48	
56		United Systems	1/1/2004	SL / N/A	10.0000	9,368.00	
73		Furniture and Eq	6/1/2005	M / HY	10.0000	4,846.00	
86		Furniture and Eq	6/1/2007	SL / N/A	10.0000	8,157.00	
94		Furniture and Eq	6/1/2008	SL / N/A	10.0000	1,293.00	
113		Furniture and Eq	6/1/2011	SL / N/A	25.0000	12,886.00	
Subtotal: OFFICE FURNITURE & EQUIPMENT						98,768.13	
Less dispositions and exchanges:							0.00
Net for: OFFICE FURNITURE & EQUIPMENT						98,768.13	
OTHER PLANT & EQUIPMENT							
35		Other plant & eq	11/1/1986	SL / N/A	50.0000	24,634.00	
36		Ford 8 Station m	7/31/2002	SL / N/A	50.0000	7,736.00	

Subtotal: OTHER PLANT & EQUIPMENT	32,370.00
Less dispositions and exchanges:	0.00
Net for: OTHER PLANT & EQUIPMENT	32,370.00

POWER OPERATED EQUIPMENT

50	Power operated	3/1/1990 SL / N/A	20.0000	14,895.00
51	Ditchwhitch-199	6/30/1999 SL / N/A	20.0000	41,828.00
52	6045 White trac	4/24/2001 SL / N/A	20.0000	15,652.00
53	1996 Internation	5/23/2002 SL / N/A	20.0000	19,500.00
54	new case 580S	1/14/2003 SL / N/A	20.0000	37,125.00
62	Grasshopper	1/1/2004 SL / N/A	20.0000	8,200.00
63	UPS and weede	1/1/2004 SL / N/A	20.0000	293.18
64	Supplies	1/1/2004 SL / N/A	20.0000	525.00
65	Test pump	1/1/2004 SL / N/A	20.0000	1,899.50
75	Power Operated	6/1/2005 M / HY	10.0000	1,944.00
88	Power Operated	6/1/2007 SL / N/A	10.0000	31,181.00
96	Power Operated	6/1/2008 SL / N/A	10.0000	3,636.00
102	Power Operated	6/1/2009 SL / N/A	10.0000	1,580.00
114	Power Operated	6/1/2011 SL / N/A	10.0000	61,786.00
122	Power Operated	6/1/2012 SL / N/A	10.0000	22,677.00
125	Power Operated	6/1/2013 SL / N/A	10.0000	15,980.00
128	Power Operated	6/1/2014 SL / N/A	10.0000	52,262.00

Subtotal: POWER OPERATED EQUIPMENT

330,963.68	0.00
0.00	278,559.50
	6,824.20
	285,383.70

System No.	S	Description	Date In Service	Method / Conv.	Life	Cost / Other Basis
------------	---	-------------	-----------------	----------------	------	--------------------

Less dispositions and exchanges: 0.00

Net for: POWER OPERATED EQUIPMENT **330,963.68**

PUMPING EQUIPMENT

7	Pumping equip	3/1/1987 SL / N/A	50.0000	146,494.89
8	Pump overhaul	3/1/2001 SL / N/A	50.0000	7,829.34
45	Pumping Equip	6/1/2013 SL / N/A	20.0000	968.00
58	Office CTU w/ P	1/1/2004 SL / N/A	50.0000	5,555.00
59	Motors and inst	1/1/2004 SL / N/A	50.0000	3,408.00
60	Pump station pa	1/1/2004 SL / N/A	50.0000	17,797.00
70	Pumping Equip	6/1/2005 MSL / MM	50.0000	5,363.00
76	Pumping Equip	6/1/2006 MSL / MM	50.0000	10,158.00
82	Pumping Equip	6/1/2007 MSL / MM	50.0000	1,307.00
90	Pumping Equip	6/1/2008 SL / N/A	50.0000	1,799.00
98	Pumping Equip	6/1/2009 SL / N/A	50.0000	7,580.00
109	Pumping Equip	6/1/2011 SL / N/A	20.0000	3,913.00
116	Pumping Equip	6/1/2012 SL / N/A	20.0000	280,788.00
129	Pumping Equip	6/1/2015 SL / N/A	20.0000	1,625.00

Subtotal: PUMPING EQUIPMENT

Less dispositions and exchanges: 0.00

Net for: PUMPING EQUIPMENT **494,585.23**

SERVICES

32	Services	7/1/1987 SL / N/A	50.0000	120,774.07
----	----------	-------------------	---------	------------

Subtotal: SERVICES

Less dispositions and exchanges: 0.00

Net for: SERVICES **120,774.07**

STRUCTURES & IMPROVEMENTS

4	Structures and i	3/1/1991 SL / N/A	50.0000	89,586.00
5	Storage building	11/30/1999 SL / N/A	50.0000	53,484.94
6	New office build	6/30/1999 SL / N/A	50.0000	247,568.00
57	Structures and i	1/1/2004 SL / N/A	50.0000	11,728.00
68	Structures and l	6/1/2006 MSL / MM	50.0000	3,520.00
69	Structures and l	6/1/2005 MSL / N/A	50.0000	4,680.00
81	Structures and l	6/1/2007 MSL / MM	50.0000	1,127.00
89	Structures and l	6/1/2008 SL / N/A	50.0000	1,337.00
97	Structures and l	6/1/2009 SL / N/A	50.0000	957.00
103	Structures and l	6/1/2010 SL / N/A	50.0000	1,316.00
104	Structures and l	6/1/2011 SL / N/A	38.0000	4,822.00
115	Structures and l	6/1/2012 SL / N/A	38.0000	7,652.00

Subtotal: STRUCTURES & IMPROVEMENTS

Less dispositions and exchanges: 0.00

Net for: STRUCTURES & IMPROVEMENTS **427,777.94**

Net for: STRUCTURES & IMPROVEMENTS

427,777.94

System No.	S	Description	Date In Service	Method / Conv.	Life	Cost / Other Basis
TRANS & DIST. MAINS						
11		Transmission m	12/31/1987 SL / N/A		50.0000	4,411,428.65
12		PHASE VII EXTE	12/1/1998 SL / N/A		50.0000	412,436.79
13		Extentions	6/30/1998 SL / N/A		50.0000	33,317.09
14		Extensions - 6/1	6/17/1999 SL / N/A		50.0000	40,695.00
15		Extensions 8/23	8/23/1999 SL / N/A		50.0000	89,582.17
16		Extension 10/15	10/15/1999 SL / N/A		50.0000	126,030.55
17		Kessler ridge	10/30/1999 SL / N/A		50.0000	19,198.00
18		Extension by M	6/30/1999 SL / N/A		50.0000	89,023.41
19		Phase VII Comp	1/1/1999 SL / N/A		50.0000	412,436.79
20		Extension by M	6/30/2000 SL / N/A		50.0000	43,824.17
21		Turket neck ben	9/1/2001 SL / N/A		50.0000	471,979.54
22		Water line exten	6/1/2001 SL / N/A		50.0000	67,435.00
23		Water line exten	7/1/2002 SL / N/A		50.0000	202,383.49
24		4670' line - Gam	9/19/2003 SL / N/A		50.0000	56,040.00
25		Meredith creek r	6/19/2003 SL / N/A		50.0000	26,874.40
26		Lebanon Churc	4/15/2003 SL / N/A		50.0000	6,031.00
27		S. Meshack ext	9/19/2003 SL / N/A		50.0000	3,233.00
28		combs line exte	10/15/2003 SL / N/A		50.0000	1,945.00
29		Old proffitt rd ex	10/29/2003 SL / N/A		50.0000	5,077.00
30		Ivy Hill Rd Exten	6/16/2003 SL / N/A		50.0000	2,370.00
31		Hurt Rd Extensi	6/30/2003 SL / N/A		50.0000	3,560.00
67		water line exten	1/1/2004 SL / N/A		50.0000	545,862.00
71		Transmission an	6/1/2005 MSL / MM		50.0000	168,959.00
78		Transmission an	6/1/2006 MSL / MM		50.0000	85,119.00
84		Transmission an	6/1/2007 MSL / MM		50.0000	74,944.00
92		Transmission an	6/1/2008 SL / N/A		50.0000	34,967.00
100		Transmission an	6/1/2009 MSL / N/A		50.0000	45,043.00
106		Transmission an	6/1/2010 SL / N/A		50.0000	146,268.00
111		Transmission an	6/1/2011 SL / N/A		50.0000	51,863.00
118		Transmission an	6/1/2012 SL / N/A		50.0000	894,387.00
123		Transmission an	6/1/2013 SL / N/A		50.0000	35,042.00
126		Transmission an	6/1/2014 SL / N/A		50.0000	31,204.00
132		Transmission an	6/1/2015 SL / N/A		50.0000	32,621.00
137		Transmission an	6/1/2016 SL / N/A		50.0000	40,512.00
Subtotal: TRANS & DIST. MAINS						8,711,692.05
Less dispositions and exchanges:						0.00
Net for: TRANS & DIST. MAINS						8,711,692.05
TRANSPORTATION EQUIPMENT						
47		2000 Chevt 4x4	12/14/1999 SL / N/A		10.0000	23,007.00
48		1999 Chevy Silv	7/30/1999 SL / N/A		10.0000	16,785.00
49		New flatbed trai	3/31/2003 SL / N/A		10.0000	9,850.00
55		2004 Dodge tru	1/1/2004 SL / N/A		10.0000	22,830.00
74		Transportation E	6/1/2005 M / HY		10.0000	24,130.00
80		Transportation E	6/1/2006 M / HY		10.0000	2,232.00
ption		Date In Service				
Method / Conv.	Life	Cost / Other Basis				
Bus./ Inv. %	Sec. 179/ Bonus					
Salvage/ Basis Adj.						
Beg. Accum. Depreciation						
Current Depreciation						
Total Depreciation						
TRANSPORTATION EQUIPMENT						
87		Transportation E	6/1/2007 SL / N/A		10.0000	16,000.00
95		Transportation E	6/1/2008 SL / N/A		10.0000	39,657.00
108		Transportation E	6/1/2010 SL / N/A		10.0000	8,656.00
120		Transportation E	6/1/2012 SL / N/A		7.0000	25,577.00
134		Transportation E	6/1/2015 SL / N/A		7.0000	26,362.00
Subtotal: TRANSPORTATION EQUIPMENT						215,086.00
Less dispositions and exchanges:						0.00
Net for: TRANSPORTATION EQUIPMENT						215,086.00
Unassigned						

130	Construction In	6/1/2016 No Calc / N/A	0.0000	8,060,804.00
Subtotal: Unassigned				8,060,804.00
Less dispositions and exchanges:				0.00
Net for: Unassigned				8,060,804.00
Subtotal:				22,087,679.26
Less dispositions and exchanges:				0.00
Grand Totals:				22,087,679.26

Bus./ Inv. %

100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000


100.0000
100.0000
100.0000
100.0000

100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000


00 0.00

100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000


100.0000
100.0000

Bus./ Inv. %


100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000
100.0000



100.0000
100.0000
100.0000
100.0000
100.0000
100.0000



0.00 0.0
0.00 0.0
.00 0.0(
.00 0.0(
.00 0.0(
.00 0.0(
0.00 0.00



100.0000

