KENTUCKY-AMERICAN WATER COMPANY CASE NO. 2004-00103 FORECASTED TEST PERIOD FILING REQUIREMENTS EXHIBIT NO. 36

Description of Filing Requirement:

Cost of Service Study

Response:

Please see attached.

For electronic version, refer to KAW_APP_EX36_043004.pdf

KENTUCKY-AMERICAN WATER COMPANY Lexington, Kentucky

COST OF SERVICE

ALLOCATION STUDY

AS OF NOVEMBER 30, 2001

AND PROPOSED CUSTOMER RATES

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, INC.

Harrisburg, Pennsylvania



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April 24, 2000

Kentucky-American Water Company 2300 Richmond Road Lexington, KY 40502

Attention Mr. Roy W. Mundy, II, President

Gentlemen:

Pursuant to your request, we have conducted a cost of service allocation study based on proforma revenue requirements for the test year ending November 30, 2001, and have prepared proposed rate schedules designed to produce the proforma revenue requirements.

The attached report presents the results of the study, as well as supporting schedules which set forth the detailed cost allocation calculations. Schedule A on page 6 presents a comparison of the cost of service by customer classification with the proforma revenues produced by each classification under present and proposed rates.

Respectfully submitted,

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, INC.

Paul R Herlunt

PAUL R. HERBERT

Vice President

PRH:krm

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PART I. INTRODUCTION

AS OF NOVEMBER 30, 2001 AND PROPOSED CUSTOMER RATES

PART I. INTRODUCTION

PLAN OF REPORT

The report sets forth the results of the cost of service allocation study as of November 30, 2001, prepared for Kentucky-American Water Company. Part I, Introduction, contains statements with respect to the basis of the study, the procedures employed, and a summary of the results of the study. Part II, Cost of Service by Customer Classification and cost function, presents detailed schedules of the allocation of costs to cost functions and customer classifications, as well as the bases for the allocations. Part III, Proposed Customer Rates, sets forth a comparison of the present and proposed rate structures, and the development of the proposed service charges.

BASIS OF THE STUDY

The purpose of the study was to allocate costs to several customer classifications based on considerations of quantity of water consumed, variability of rate of flow, and costs associated with metering, billing and accounting. The allocation study was based on recognized procedures for allocating the several categories of costs to customer classifications in proportion to each classification's use of the facilities, commodities and services which entail the total cost of providing water service.

ALLOCATION PROCEDURES

The allocation study was based on the Base-Extra Capacity Method for allocating costs to customer classifications. The method is described in the 1991 and prior editions of the Water Rates Manual, published by the American Water Works Association. The four basic categories of cost responsibility are base, extra capacity, customer and fire protection costs. The following discussions present a brief description of these costs and the manner in which they were allocated.

Base Costs are costs that tend to vary with the quantity of water used, plus costs associated with supplying, treating, pumping and distributing water to customers under average load conditions, without the elements necessary to meet peak demands. Base costs were allocated to customer classifications on the basis of average daily usage.

Extra Capacity Costs are costs associated with meeting usage requirements in excess of the average. They include operating and capital costs for additional plant and system capacity beyond that required for average use. The extra capacity costs in this study are subdivided into costs necessary to meet maximum day extra demand and costs to meet maximum hour extra demand. The extra capacity costs were allocated to customer classifications on the bases of each classification's maximum day and hour usage in excess of average usage. (Extra capacity costs related to fire protection are allocated directly to the fire protection classifications.)

<u>Customer Costs</u> are costs associated with serving customers regardless of their usage or demand characteristics. Customer costs include the operating and capital costs related to meters and services, meter reading costs, and billing and collecting

costs. The customer costs were allocated on the bases of the relative cost of meters and services and the number of customers.

Fire Protection Costs are costs associated with providing the facilities to meet the potential peak demand of fire protection service. Fire protection costs are subdivided into costs to meet Public Fire Protection and Private Fire Protection demands. Operating and capital costs for hydrants were allocated directly to the Public Fire Protection classification. The extra capacity costs assigned to fire protection service were allocated to Public and Private Fire Protection on the basis of the total relative demands of the hydrants and fire service lines.

The data summarized in Schedule A, "Comparison of Cost of Service with Revenues Under Present and Proposed Rates for the Twelve Months Ending November 30, 2001," constitute the principal results of the allocation study.

The cost of service by customer classification, shown in column 2 of Schedule A, is developed in Schedule B, "Allocation of Cost of Service by Cost Function to Customer Classifications". The allocation of the cost of service by function to the several customer classifications was performed by applying the allocation factors referenced in column 2 of Schedule B to the cost of service by function in column 3. The bases of the allocation factors are presented in Schedule C.

The cost of service by cost function is set forth in Schedule D, "Cost of Service for the Twelve Months Ending November 30, 2001, Allocated to Cost Functions." The allocation of the cost of service to the cost functions was performed by applying the

allocation factors referenced in column 2 to the cost of service by account in column 3.

The bases of the factors are presented in Schedule E.

DESIGN OF PROPOSED RATES

A comparison of the present and proposed rate structures is presented in Schedule G of Part III of the report. The proposed rates maintains the existing structure consisting of service charges by meter size applicable to all classes and single-block consumption charges for each classification. The service charges were developed on Schedule H, based on the cost of service related to meters, services, billing and collecting and meter reading. The overall increase to the service charges is approximately 9.8%.

The consumption charges were increased so that the revenues under proposed rates would move toward the indicated cost of service as shown in Schedule A. No increase to private and public fire service rates is proposed at this time in accordance with the cost of service.

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KENTUCKY-AMERICAN WATER COMPANY

COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES FOR THE TWELVE MONTHS ENDING NOVEMBER 30, 2001

Cost of Service							Proposed I	ncrease
Customer	Amount	_	Revenues, Pre		Revenues, Prop	osed Rates		Percent
Classification	(Schedule B)	Percent	Amount	Percent	Amount	Percent	Amount	Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential	\$23,310,575	53.2%	\$ 20,228,835	52.2%	\$ 23,349,627	53.3%	\$ 3,120,792	15.4%
Commercial	11,756,185	26.8%	10,593,744	27.3%	11,763,384	26.8%	1,169,640	11.0%
Industrial	2,185,700	5.0%	1,726,523	4.5%	2,050,842	4.7%	324,319	18.8%
Public Authority	3,208,840	7.3%	2,910,200	7.5%	3,210,181	7.3%	299,981	10.3%
Sales for Resale	901,646	2.1%	785,055	2.0%	904,474	2.1%	119,419	15.2%
Private Fire	676,946	1.6%	785,918	2.0%	785,918	1.8%	-	0.0%
Public Fire	1,761,640	4.0%	1,736,908	4.5%	1,736,908	4.0%		0.0%
Total Sales	43,801,532	100.0%	38,767,183	100.0%	43,801,334	100.0%	5,034,151	13.0%
Other Revenues	1,319,836		1,319,836		1,319,836			0.0%
Total	\$45,121,368		\$40,087,019	•	\$ 45,121,170		\$ 5,034,151	12.6%

PART II. COST OF SERVICE BY CUSTOMER CLASSIFICATION AND COST FUNCTION

ALLOCATION OF COST OF SERVICE BY COST FUNCTION TO CUSTOMER CLASSIFICATIONS

		Cost of						Fire S	ervice
Cost Function	Factor Ref.*	Service (Schedule D)	Residential	Commercial	Industrial	Public Authorities	Sales for Resale	Private Fire	Public Fire
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Base	Α	\$19,638,644	\$8,912,016	\$6,533,777	\$1,555,381	\$2,009,033	\$622,545	\$1,964	\$3,928
Extra Capacity - Maximum Day	В	7,667,942	3,846,239	2,537,322	402,567	693,949	187,865		
Extra Capacity - Maximum Hour	С	4,802,264	2,429,945	1,692,318	212,260	383,221	84,520		
Customer Facilities - Meters	D	2,103,496	1,621,376	379,260	11,359	66,470	5,048	19,983	
Customer Facilities - Services	E	1,992,734	1,688,243	186,321	1,993	20,326	598	95,253	
Billing and Collecting	F	3,844,518	3,456,222	306,793	1,538	25,758	769	52,285	1,153
Meter Reading	G	1,504,920	1,356,534	120,394	602	10,083	301	17,006	
Private Fire	н	490,455						490,455	
Public Fire	1	1,756,559							1,756,559
Total		\$43,801,532	\$23,310,575	\$11,756,185	\$2,185,700	\$3,208,840	\$901,646	\$676,946	\$1,761,640

^{*} Schedule C.

FACTORS FOR ALLOCATING COSTS BY FUNCTION TO CUSTOMER CLASSIFICATIONS

FACTOR A. ALLOCATION OF BASE COSTS.

Factors are based on the pro forma test year average daily consumption for each customer classification.

	Average Daily	
	Consumption,	Allocation
Classification	Thousand Gal.	Factor
(1)	(2)	(3)
Residential	16,690	0.4538
Commercial	12,234	0.3327
Industrial	2,914	0.0792
Other Public Authority	3,763	0.1023
Sales for Resale	1,164	0.0317
Private Fire Protection	3	0.0001
Public Fire Protection	6	0.0002
Total	36,774	1.0000

FACTOR B. ALLOCATION OF MAXIMUM DAY EXTRA CAPACITY COSTS.

Factors are based on the maximum day extra capacity demand for each customer classification.

Customer Classification (1)	Average Daily Consumption, Thousand Gal. (2)	Factor* (3)	Rate of Flow, Thousand Gal. Per Day (4)=(2)x(3)	Allocation Factor (5)
Residential	16,690	1.0	16,690	0.5016
Commercial	12,234	0.9	11,011	0.3309
Industrial	2,914	0.6	1,748	0.0525
Other Public Authority	3,763	8.0	3,010	0.0905
Sales for Resale	1,164	0.7	815	0.0245
Total	36,765		33,274	1.0000

^{*} Ratio of Maximum Day To Average Day Minus 1.0.

FACTORS FOR ALLOCATING COSTS BY FUNCTION TO CUSTOMER CLASSIFICATIONS

FACTOR C. ALLOCATION OF MAXIMUM HOUR EXTRA CAPACITY COSTS.

Factors are based on the maximum hour extra capacity demand for each customer classification.

Customer Classification (1)	Average Hourly Consumption, Thousand Gal. (2)	Factor*(3)	Rate of Flow, Thousand Gal. Per Hour (4)=(2)x(3)	Allocation Factor (5)
Residential	695.4	2.0	1,390.8	0.5060
Commercial	509. 8	1.9	9 68.6	0.3524
Industrial	121.4	1.0	121.4	0.0442
Other Public Authority	156.8	1.4	219.5	0.0798
Sales for Resale	48.5	1.0	48.5	0.0176
Total	1,531.9		2,748.8	1.0000

[•] Ratio of Maximum Hour To Average Hour Minus 1.0.

FACTOR D. ALLOCATION OF COSTS ASSOCIATED WITH METERS.

Factors are based on the relative cost of meters by size and customer classification, as developed on the following page and summarized below.

Customer	5/8" Dollar	Allocation
Classification	Equivalents	Factor
(1)	(2)	(3)
Residential	91,950	0.7708
Commercial	21,508	0.1803
Industrial	649	0.0054
Other Public Authority	3,768	0.0316
Sales for Resale	282	0.0024
Private Fire Protection	1,132	0.0095
Total	119,289	1.0000

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KENTUCKY-AMERICAN WATER COMPANY

BASIS FOR ALLOCATING METER COSTS TO CUSTOMER CLASSIFICATIONS

	5/8*		iential	Сотп	nercial	Indu	strial		ic Authority	Sales fo	r Resale	Private Fin	Protection	т	otal
Meter Size	Dollar Equivalent	Number of Meters	Weighting	Number of Meters	141-1-1-11	Number of	181-1-14	Number of	181-1-1-1-1	Number of		Number of		Number of	
(1)	(2)	(3)	(4)=(2)X(3)	(5)	Weighting (8)=(2)X(5)	Meters (7)	Weighting (8)=(2)X(7)	Meters (9)	Weighting (10)=(2)X(9)	Meters (11)	Weighting (12)=(2)X(11)	Meters (13)	Weighting (14)=(2)X(11)	Meters (15)	Weighting (16)
5/8	1.0	88,645	88,645	4,464	4,464	1	1	137	137	0	0	1,132	1,132	94,379	94,379
1	2.0	1,427	2,854	1,921	3,843	1	2	168	336	0	0	0	o	3,518	7,035
1-1/2	7.4	11	81	154	1,140	1	7	29	215	0	0	0	0	195	1,443
2	7.7	48	370	1,425	10,973	22	169	300	2,310	8	62	. 0	o	1,803	13,884
3	12.7	0	o	1	13	0	0	0	0	0	0	0	0	1	13
4	17.8	0	o	29	510	14	246	31	548	4	70	0	0	78	1,372
в	74.8	0	o	4	299	3	224	3	224	2	150	0	. 0	12	897
8	133.0	0	0	2	266	0	0	0	0	0	0	0	0	2	266
Total		90,131	91,950	8,000	21,508	42	649	668	3,768	14	_282	1,132	1,132	99,988	119,289

FACTORS FOR ALLOCATING COSTS BY FUNCTION TO CUSTOMER CLASSIFICATIONS

FACTOR E. ALLOCATION OF COSTS ASSOCIATED WITH SERVICES.

Factors are based on the relative cost of services by size and customer classification, as developed on the following page and summarized below.

Customer	3/4" Dollar	Allocation
Classification	Equivalents	Factor
(1)	(2)	(3)
Residential	90,430	0.8472
Commercial	9,979	0.0935
Industrial	102	0.0010
Other Public Authority	1,094	0.0102
Sales for Resale	36	0.0003
Private Fire Protection	5,101	0.0478
Total	106,742	1.0000

FACTOR F. ALLOCATION OF BILLING AND COLLECTING COSTS.

Factors are based on the total number of customers.

Customer Classification	Total Customers (2)	Allocation Factor (3)
(1)	(2)	(0)
Residential	90,131	0.8990
Commercial	8,000	0.0798
Industrial	42	0.0004
Other Public Authority	668	0.0067
Sales for Resale	14	0.0002
Private Fire Protection	1,366	0.0136
Public Fire Protection	34	0.0003
Total	100,256	1.0000

BASIS FOR ALLOCATING SERVICE COSTS TO CUSTOMER CLASSIFICATIONS

		3/4"		Jential	Comm	nercial	Indu	strial	Other Publ	ic Authority	Sales fo	r Resale	Private Fir	e Protection	Тс	otal
	Service Size	Dollar Equivalent	Number of Services	Malabita -	Number of	144-1-64	Number of	141-1-14	Number of	181 1-141	Number of		Number of		Number of	
	(1)	(2)	(3)	Weighting (4)=(2)X(3)	Services (5)	Weighting (8)=(2)X(5)	Services (7)	Weighting (8)=(2)X(7)	Services (9)	Weighting (10)=(2)X(9)	Services (11)	Weighting (12)=(2)X(11)	Services (13)	Weighting	Services	Weighting
	.,,	(/	\- /	() (=) (0)	(0)	(0)-(2)-(0)	\·,	(0) (2)/(/)	(0)	(10]-(2)-(0]	,,,,,,	(12)-(2)~(11)	(13)	(14)=(2)X(11)	(15)	(16)
	3/4	1.00	88,645	68,645	4,464	4,464	1	1	137	137	0	0	0	0	93,247	93,247
	1	1.17	1,427	1,670	1,921	2,248	1	1	168	197	0	0	0	0	3,518	4,118
	1-1/2	1.58	11	17	154	243	1	2	29	48	0	0	0	o	195	308
	2	2.04	48	98	1,425	2,907	22	45	300	612	8	16	41	84	1,844	3,762
	4	2.88	0	0	30	86	14	40	- 31	89	4	12	229	660	308	887
	6	4.24	0	0	4	17	3	13	3	13	2	8	618	2,612	628	2,663
	8	6.98	0	o	2	14	0	0	0	0	0	0	239	1,668	241	1,682
	10	9.50	0	o	0	0	0	0	0	0	0	o	5	48	5	. 48
,	12	12.18	a	0	0	0	0	0	0	0	0	0	1	12	1	12
	16	18.89	0	0	0	0	0	0	0	0	0	<u> </u>	1	17	1	17
	Total		90,131	90,430	8,000	9,979	42	102	668	1,094	14	36	1,132	5,101	99,988	106,742

Schedule C

FACTORS FOR ALLOCATING COSTS BY FUNCTION TO CUSTOMER CLASSIFICATIONS

FACTOR G. ALLOCATION OF METER READING COSTS.

Factors are based on the number of metered customers.

Customer	Total Metered	Allocation
Classification	Customers	Factor
(1)	(2)	(3)
Residential	90,131	0.9014
Commercial	8,000	0.0800
Industrial	42	0.0004
Other Public Authority	668	0.0067
Sales for Resale	14	0.0002
Private Fire Protection	1,132	0.0113
Total	99,988	1.0000

FACTOR H. ALLOCATION OF PRIVATE FIRE PROTECTION COSTS.

These costs are assigned directly to Private Fire Protection.

Cost	Allocation
Function	Factor
(1)	(2)
Private Fire Protection	1.0000

FACTOR I. ALLOCATION OF PUBLIC FIRE PROTECTION COSTS.

These costs are assigned directly to Public Fire Protection.

Cost	Allocation
Function	Factor
(1)	(2)
Public Fire Protection	1.0000

	Factor Cost of		Futur C	Extra Capacity Customer Facilities			Customer A	Y	Fire Service		
Account	Ref.	Service	Base	Max Day	Max Hour			Billing &	Meter	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	Meters (7)	Services (8)	Collecting (9)	Reading (10)	Fire	Fire
OPERATION AND MAINTENANCE EXPE		` '	` '	ν-,	(-7	(,,	(0)	(9)	(10)	(11)	(12)
SOURCE OF SUPPLY EXPENSES											
-OPERATION-											
600 Supervision & Engineering	2	0	0	0	0	0	0	0	0	0	0
601 Operation Expense and Labor					•	· ·	ŭ	· ·	· ·	U	U
Expenses	2	0	0	0	0	0	0	0	0	0	0
Labor	2	0	0	0						_	-
602 Purchased Water	1	243,499	243,499	0	0	0	0	0	0	0	0
603 Miscellaneous Expenses	2	0	0	0	0	0	0	0	0	0	0
604 Rents	2	0	0	0	. 0	0	0	0	0	0	0
Total Operation		243,499	243,499	0	0	0	0	0	0	0	0
-MAINTENANCE-											
610 Supervision & Engineering	2	0	0	0	0	0	0	0	0	0	0
612 Maint Coll & Impound Res	1	0	0	0	0	0	0	0	0	Ō	0
613.1 Maint Lakes, River & Intakes	2	70,148	43,843	26,306	0	0	0	0	0	0	0
613.2 Amort Lakes, River & Intakes	2	0	0	0	0	0	0	0	0	0	0
614 Wells and Springs Maint	2		0	0	0	0	0	0	0	0	0
816 Maint Supply Mains Mat	2	0	0	0	0	0	0	0	0	0	0
617 Maint Misc Water Source											
Expenses	2	31,870	19,919	11,951	0	0	0	0	0	0	0
Labor	2	0	0	0	0	0	0	0	0	0	0
Total Maintenance		102,018	63,761	38,257	0	0	0	0	0	. 0	0
Total Source of Supply		345,517	307,260	38,257	0	0	0	0	0	0	0
POWER AND PUMPING EXPENSES											
-OPERATION-											
620 Pumping Supervision & Eng Electric	: 6	0	0	0	0	0	0	0	0 -	0.	0
622 Pump Power Prod Labor & Exp				•							
Expenses	6	0	0	.0	0	0	0	0	. 0	0	0
Labor	6	0	0	0	0	0	0	0	0	0	0
623 Pump Fuel and Power Purchase	1	1,946,339	1,946,339	0	0	0	0	0	0	0	0
624 Pump Labor and Expenses				_	_	_	_				
Expenses	6	0	0 -	0	0	0	0	0	0	0	0
Labor	6	0	0	0	0	. 0	0	0	0	0	0
626 Misc Pumping Expenses Electic	6	13,486	7,915	4,368	889	0	0	0	0	129	185

								Customer A	ccounting	Fire Se	rviće
	Factor	Cost of	_	Extra Ca	apacity	Customer	Facilities	Billing &	Meter	Private	Public
Account	Ref.	Service	Base	Max Day	Max Hour	Meters	Services	Collecting	Reading	Fire	Fire
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
-MAINTENANCE-											
630 Supervision & Engineering	6	59,092	34,681	19,140	3,894	0	0	0	0	567	810
631 Pump Struc & Imp Maint		•	•	-,	4,00	Ū	· ·	v	U	567	810
Expenses	6	0	0	0	0	0	0	0	0	0	0
Labor	6	0	0	0	0	0	Ō	ō	ŏ	ő	0
632 Pump Maint Power Prod Equipment							•		•	ū	ŭ
Expenses	6	58,500	34,334	18,948	3,855	0	0	0	0	562	801
Labor	6	0	0	0	0	0	0	0	Q	0	0
633 Pump Maint Pumping Equipment											
Expenses	6	104,462	61,309	33,835	6,884	0	0	0	0	1,003	1,431
Labor	6	1,806	1,060	585	119	0	0	0	0	17	25
Total Maintenance		223,860	131,383	72,508	14,752	0	0	0	0	2,149	3,067
Total Power and Pumping		2,183,685	2,085,637	76,876	15,641	0	0	0	0	2,279	3,252
WATER TREATMENT -OPERATION-											
640 Supervision and Engineering	2	455,728	284,830	170,898	0	0	0	0	0	0	0
641 Chemicals	1	1,025,251	1,025,251	0	0	0	0	.0	0	0	0
642.1 Labor and Expenses											
Expenses	2	168,319	105,199	63,120	0	0	0	0	0	0	0
Labor	2	709,028	443,143	265,886	0	0	0	0	0	0	0
643 Misc Water Treatment Exp-Current											
Expenses - Other	2	299,675	187,297	112,378	0	0	0	0	0	0	0
Expenses - Waste Disposal	1	129,150	129,150	0	0	0	0	0	0	0	0
Labor	1	0	0	0	0	0	Ó	0	0	0	0
644 Rents	2	35,100	21,938	13,163	0	0	0	0	0	0	0
Total Operation		2,822,251	2,196,807	625,444	0	0	0	0	0	0	0
-MAINTENANCE-											
650 Supervision and Engineering	2	153,113	95,696	57,417	0	0	0	0	0	0	0
651 Structures and Improvements											Ω.
Expenses	2	245,340	153,338	92,003	0	0	0	0	0	0	o 닭
Labor	2	0	0	0	0	0	0	0	0	0	Schedule
652 General Water Equip					•						5
Expenses	2	200,856	125,535	75,321	0	0	0	0	0	0	o ⊨
Labor	2	0	0	0	0	0	0	0	0	0	
Total Maintenance		599,309	374,568	224,741	0	0	0	0	0	0	0 ,
Total Water Treatment Expenses		3,421,560	2,571,375	850,185	0	0	0	0	0	0	0

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								Customer A	ccounting	Fire Se	rvice
	Factor	Cost of		Extra C		Customer	Facilities	Billing &	Meter	Private	Public
Account	Ref.	Service	Base	Max Day	Max Hour	Meters	Services	Collecting	Reading	Fire	Fire
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
TRANSMISSION AND DISTR -OPERATION-	IBUTION EXPENSES										
660 Supervision and Enginee	ering 8	261,344	111,620	22,031	104,851	0	0	0	0	9,356	13,485
661 Storage Facilities Expen662 Lines Expense	nse 5	0	0	0	0	0	0	0	0	0	0
Expenses	7	32,915	14,222	3,012	12,882	0	0	0	0	1,146	1,653
Labor 663 Meter Expense	7	684,264	295,661	62,615	267,798	0	0	0	0	23,823	34,367
Expenses	9	0	0	0	0	0	0	0	0	o	0
Labor	9	Ō	Ō	Ō	0	Ō	Ö	0	Ö	ő	0
664 Customer Installation Ex	rpenses										
Expenses	9	0	0	0	0	0	0	0	0	0	0
Labor	9	0	0	0	0	0	0	0	0	0	0
665 Maps and Records	_					_	_	_	_		
Expenses	8	6,132	2,619	517	2,460	0	0	0	0	220	316
Labor	8	30,609	13,073	2,580	12,280	0	0	0	0	1,096	1,579
665 Miscellaneous Expenses		470 504	75.440	44.004	70 027	0	0	0		6 004	0.444
Expenses - Other	8	176,564	75,410	14,884	70,837	0 0	0	0	0	6,321	9,111
Expenses - Distribution	Reservoirs 5	61,375	22,654 0	0 0	31,712 0	0	0	0	0	2,872 0	4,137 0
Labor	8 8	0 24,494	10,461	2,065	9,827	0	0	0	0	877	1,264
666 Rents	0	24,454	10,401	2,000	0,027						1,20
Total Operation		1,277,697	545,721	107,704	512,649	0	0	0	0	45,711	65,913
-MAINTENANCE-											
670 Supervision and Engine	ering 14	160,914	36,672	4,795	40,132	16,928	37,670	0	0	3,604	21,112
671 T & D Structures & Impr								_	_		
Expenses	14	6,754	1,539	201	1,684	711	1,581	0	0	151	886
Labor	14		0	0	0	0	0	0	. 0	0	0
672 Reservoirs and Standpip			=		00.700			•	•	0.004	40.000
Expenses	5	192,960	71,222	0	99,702 0	0 0	0	0	0	9,031	13,006 0
Labor	5	0	0	. 0	U	U	U	U	U	0	U
673 T&D Mains	7	63,970	27,641	5,854	25,036	0	0	0	0	2,227	3,213
Expenses	7	202,815	87,634	18,559	79,375	0	0	Ö	0	7,061	10,186
Labor 675 Services	,	202,010	07,004	10,000	, 3,3,3	ŭ	J	Ū	v	,,001	10,100
Expenses	10	0	0	0	0	0	0	0	0	0	0
Labor	10	191,587	ŏ	ő	ŏ	ő	191,587	ŏ	ŏ	Ö	0
676 Meters		. 3 . 100 .	J		-		**		-	-	·
Expenses	9	0	0	· o	0	0	0	0	0	0	0
	9	86,075	0	0	0	86,075	0	0	G	o o	0

• •								Customer A	Accounting	Fire Se	rvice
	Factor	Cost of		Extra Ca	apacity	Customer	Facilities	Billing &	Meter	Private	Public
Account	Ref.	Service	Base	Max Day	Max Hour	Meters	Services	Collecting	Reading	Fire	Fire
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
677 Hydrants						•					
Expenses	13	0	0	0	0	0	0	0	0	0	o
Labor	13	80,999	0	0	0	0	0	o	ő	0	80,999
678 Miscellaneous Plant								•	v	· ·	00,555
Expenses	14	368,371	83,952	10,977	91,872	38,753	86,236	0	0	8,252	48,330
Labor	14	27,075	6,170	807	6,753	2,848	6,338	0	0	606	3,552
Total Maintenance		1,381,520	314,829	41,193	344,554	145,315	323,412	0	0	30,933	181,284
Total Transmission and Distribution											
Expenses		2,659,217	860,550	148,898	857,203	145,315	323,412	0	0	76,643	247,197
CUSTOMER ACCOUNTS											
901 Supervision	11	284,762	0	0	0	0	0	284,762	0	0	0
902 Meter Reading Expenses							<u>-</u>		· ·	ŭ	· ·
Expenses	12	0	0	0	0	. 0	0	0	0	0	0
Labor	12 1	615,606	0	0	0	0	0	0	615,606	Ō	0
903 Recording and Collecting Expenses		·							-		
Expenses	1.1	886,504	0	0	0	0	0	886,504	0	0	0
Labor	11	594,028	0	0	0	0	. 0	594,028	0	. 0	0
904 Uncollectible Accounts	11	199,823	0	0	0	0	0	199,823	0	0	0
905 Misc Customer Accounting Expenses	: 11	45,027	0	0	0	0	0	45,027	0	0	0
907 Customer Service Expenses											
Labor	11	0	0	0	0	0	0	0	0	0	0
Total Customers' Accounting and Collecting Expenses		2,625,750	0	0	0	0	0	2,010,144	615,606	0	0
ADMINISTRATIVE AND GENERAL EXPE	NSES										
920 Administrative & General Salaries											
Expenses	15	156,347	49,155	22,076	17,292	2,877	6,410	39,822	12,195	1,563	4,956
Labor	15	1,362,158	428,262	192,336	150,654	25,064	55,848	346,941	106,248	13,622	43,180
921 Miscellaneous Office Expenses	15	455,931	143,345	64,377	50,426	8,389	18,693	116,126	35,563	4,559	14,453
923 Outside Services	15	1,423,377	447,510	200,981	157,425	26,190	58,358	362,534	111,023	14,234	45,121
924 Property Insurance	15	46,095	14,492	6,509	5,098	848	1,890	11,740	3,595	461	1,461
925 Workers Compensation	16	282,685	87,180	38,784	31,576	6,219	13,823	58,120	34,233	2,827	9,922
926 Employee Pensions and Benefits	16	1,694,883	522,702	232,538	189, 318	37,287	82,880	348,468	205,250	16,949	59,490
928 Regulatory Expenses	15	180,705	56,814	25,516	19,986	3,325	7,409	46,026	14,095	1,807	5,728 7
930 Miscellaneous General Expense	15	1,230,211	386,778	173,706	136,061	22,636	50,439	313,335	95,956	12,302	38,998
931 Administrative and General Rents	15	30,160	9,482	4,259	3,336	555	1,237	7,682	2,352	302	956
Total Operation		6,862,550	2,145,720	961,082	761,173	133,390	296,987	1,650,793	620,512	68,626	224,267

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Schedule D

		Endos	Control		Futon C		0		Customer A		Fire Se	
	Account	Factor Ref.	Cost of Service	Base	Extra Ca Max Day		Customer		Billing &	Meter	Private	Public
	(1)	(2)	(3)	(4)	(5)	Max Hour (6)	Meters	Services	Collecting	Reading	Fire	Fire
	` ,	(-,	(0)	(4)	(5)	(0)	(7)	(8)	(9)	(10)	(11)	(12)
-1	MAINTENANCE-											
93	2 Maintenance of General Plant	15	129,449	40,699	18,278	14,317	2,382	5,307	32,971	10,097	1,294	4,104
	Total Maintenance									70,007	1,204	4,104
Ŧ	otal Administrative and General		6,991,999	2,186,419	979,360	775,490	135,772	302,295	1,683,764	630,609	50 000	000 070
,	Expenses						100,112	002,230	1,000,104	030,009	69,920	228,370
7	otal Operation and Maintenance											
	Expenses		18,227,728	8,011,242	2,093,575	1,648,334	281,087	625,707	3,693,908	1 248 215	440.040	470.040
					2,000,010	1,0 10,00 1	201,001	020,101	3,093,800	1,246,215	148,842	478,819
50	3 DEPRECIATION EXPENSE											
30	1 Organization	17	2,616	1,178	548	349	201	105	44	14	39	138
30		15		0	0	0	0	0	0	0	0	0
30		17	59,424	26,753	12,455	7,939	4,55 8	2,377	1,010	309	87 9	3,144
31		2		0	0	0	0	0	0	0	0	0
31	** *	2	5,607	3,504	2,103	0	0	0	0	0	0	0
31		1	22,296	22,296	0	0	0	0	0	0	0	0
31		2	7,272	4,545	2,727	0	0	0	0	0	0	0
31		2	0	0	0	0	0	0	0	0	0	0
31	• • •	2	55,992	34,995	20,997	0	0	0	0	0	0	0
32	. •		103,863	60,957	33,641	6,845	0	0	0	0	997	1,423
32	22 Boiler Plant Equipment	6	0	0	0	0	0	0	0	0	0	0
32	3 Other Power Production Equipment	6	18,756	11,008	6,075	1,236	0	0	0	0	180	257
32	25 Electric Pumping Equipment	6	338,169	198,471	109,533	22,285	0	0	0	0	3,246	4,633
32	26 Diesel Pumping Equipment	6	18,312	10,747	5,931	1,207	0	0	0	0	176	251
32	28 Other Pumping Equipment	6	0	0	0	0	. 0	0	Ō	0	0	0
33	31 Water Treat Structures & Improv	2	125,001	78,126	46,875	0	0	0	0	0	0	0
33	32 Water Treat and Equipment	2	926,529	579,081	347,448	0	0	0	0	0	0	0
33	4 GAC	2	0	0	0	0	0	- 0	0	0	0	0
34	11 T & D Structures & Improvements	14	43,206	9,847	1,288	10,776	4,545	10,115	0	0	968	5,669
34	2 Distrib. Reservoirs & Standpipes	5	110,364	40,735	0	57,025	. 0	0	0	0	5,165	7,439
34	3 Transmission & Distribution Mains											
	Under 10 inch	4	468,171	174,768	0	244,666	0	0	0	0	19,944	28,793
	Over 12 inch	3	642,292	390,128	234,051	0	. 0	0	0	0	7,451	10,662
34	5 Services	10	558,420	0	. 0	0	0	558,420	0	0	0	0
34	6 Meters	9	122,173	0	0	0	122,173	0	0	0	0	0
34	7 Meter Installations	9	280,364	0	0	0	280,364	0	0	0	0	0
34	8 Fire Hydrants	13	155,966	0	0	0	0	0	0	0	0	155,966
34	9 Other T & D	14	0	0	0	0	0	0	0	0	0	0
35	4 Collective System Structure SWR	2	2,004	1,253	752	0	. 0	0	. 0	0	0	0
37	1 Electric Pumping Equipment SWR	6	540	317	175	36	0	0	0	0	5	7
38	9 Land and Land Rights	15		0	0	0	0	0	0	0	0	0
39	O General Structures & Improvements	15		0	0	0	0	0	0	0	0	0

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								Customer A	ccounting	Fire Se	ervice
	Factor	Cost of		Extra Ca	pacity	Customer	Facilities	Billing &	Meter	Private	Public
Account	Ref.	Service	Base	Max Day	Max Hour	Meters	Services	Collecting	Reading	Fire	Fire
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
390.1 Office Structures	15	65,254	20,516	9,214	7,217	1,201	2,675	16,620	5,090	653	2,069
390.2 General Structures - HVAC	15	14,892	4,682	2,103	1,647	274	611	3,793	1,162	149	472
390.3 Miscellaneous Structures & Improv	15	10,044	3,158	1,418	1,111	185	412	2,558	783	100	318
391 Office Furniture and Equipment	15	26,590	8,360	3,755	2,941	489	1,090	6,772	2,074	266	843
391.20 Computers & Peripheral Equipment	15	278,481	87,554	39,322	30,800	5,124	11,418	70,929	21,722	2,785	8.828
391.25 Computer Software	15	182,379	57,340	25,752	20,171	3,356	7,478	46,452	14,226	1,824	5.781
391.26 Personal Computer Software	15	189,602	59,611	26,772	20,970	3,489	7,774	48,292	14,789	1,896	6,010
391.30 Other Office Equipment	15	9,708	3,052	1,371	1,074	179	398	2,473	757	97	308
392.11 Transportation Equip-Light Trucks	15	179,076	56,301	25,286	19,806	3,295	7,342	45,611	13,968	1,791	5,677
392.12 Transportation Equip-Heavy Trucks	15	69,406	21,821	9,800	7,676	1,277	2,846	17,678	5,414	694	2,200
392.2 Transportation Equip-Cars	15	32,760	10,300	4,626	3,623	603	1,343	8,344	2,555	328	1,038
392.3 Transportation Equip-Other	15	408	128	58	45	8	17	104	32	4	13
393 Stores Equipment	15	1,380	434	195	153	25	57	351	108	14	44
394 Tools, Shop & Garage Equipment	15	50,461	15,865	7,125	5,581	928	2,069	12,852	3,936	505	1,600
395 Laboratory Equipment	2	67,448	42,155	25,293	0	0	0	0	0	0	0
396 Power Operated Equipment	15	45,162	14,199	6,377	4,995	831	1,852	11,503	3,523	452	1,432
397 Communication Equipment	15	76,634	24,094	10,821	8,476	1,410	3,142	19,519	5,977	766	2,429
397.2 Communication Equip - Telephone	15	0	0	0	0	0	0	0	0	0	0
398 Miscellaneous Equipment	15	17,735	5,576	2,504	1,961	326	727	4,517	1,383	177	562
399 Other Tangible Property	15	24,636	7,746	3,479	2,725	453	1,010	6,275	1,922	246	781
Total Depreciation Expense		5,409,393	2,091,600	1,029,867	493,335	435,294	623,275	325,697	99,742	51,796	258,786
404 AMORTIZATION EXPENSE											*
AFUDC	18	63,708	29,006	13,634	8,346	4,389	2,332	1,510	376	911	3,205
Acquisition Adjustment	18	18,456	8,403	3,950	2,418	1,272	675	437	109	264	928
Property Losses	2	579,792	362,370	217,422	0_	· 0	0	0	0	0	0
Total Amortizations		661,956	399,779	235,005	10,763	5,661	3,007	1,947	485	1,175	4,133
507.1 TAXES, OTHER THAN INCOME											
Federal and State Payroll Taxes	16	472,388	145,684	64,812	52,766	10,393	23,100	97,123	57,206	4,724	16,581
Property Taxes	18	1,325,133	603,333	283,578	173,592	91,302	48,500	31,406	7,818	18,949	66,654
Gross Receipts and surtax	19	78,280	34,545	13,488	8,446	3,703	3,507	7,992	2,646	861	3,092
Other General Taxes	18	0	0	0	0	0	0	0	0	0	0
Total Taxes, Other Than Income		1,875,801	783,562	361,878	234,805	105,397	75,107	136,521	67,670	24,534	86,327

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								Customer /	Accounting	Fire S	ervice
	Factor	Cost of		Extra Ca	apacity	Customer	Facilities	Billing &	Meter	Private	Public
Account	Ref.	Service	Base	Max Day	Max Hour	Meters	Services	Collecting	Reading	Fire	Fire
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
507.2 INCOME TAXES Utility Operating Income Available	18	5,301,934	2,413,971	1,134,614	694,553	365,303	194,051	125,656	31,281	75,818	266,687
for Return	18	13,644,556	6,212,366	2,919,935	1,787,437	940,110	499,391	323,376	80,503	195,117	686,321
Total Cost of Service		45,121,368	19,912,521	7,774,874	4,869,228	2,132,851	2,020,537	4,607,105	1,525,897	497,282	1,781,073
Less: Other Water Revenues	19	620,614	273,877	106,932	66,964	29,355	27,804	63,365	20,977	6,827	24,514
Billing and Collecting Services	11	699,222	0	0	0	0	0	699,222	0	0	0
Total Other Water Revenues		1,319,836	273,877	106,932	66,964	29,355	27,804	762,587	20,977	6,827	24,514
Total Cost of Service Related to Sales of Water		43,801,532	19,638,644	7,667,942	4,802,264	2,103,496	1,992,734	3,844,518	1,504,920	490,455	1,756,559

FACTORS FOR ALLOCATING COST OF SERVICE TO COST FUNCTIONS

FACTOR 1. ALLOCATION OF COSTS WHICH VARY WITH THE AMOUNT OF WATER CONSUMED.

Costs are allocated directly to the Base Cost Function.

Cost	Allocation
Function	Factor
(1)	(2)
Base	1.0000

FACTOR 2. ALLOCATION OF COSTS ASSOCIATED WITH FACILITIES SERVING BASE AND MAXIMUM DAY EXTRA CAPACITY FUNCTIONS.

Factors are based on the maximum day ratio of 1.60, based on a review of maximum day ratios experienced by the Company. (see Schedule F).

Cost Function (1)	Maximum Day Ratio (2)	Allocation Factor (3)
Average Day	1.00	0.6250
Maximum Day Extra Capacity	0.60	0.3750
Total	1.60	1.0000

FACTORS FOR ALLOCATING COST OF SERVICE TO COST FUNCTIONS

FACTOR 3. ALLOCATION OF COSTS ASSOCIATED WITH FACILITIES SERVING BASE, MAXIMUM DAY EXTRA CAPACITY AND FIRE PROTECTION FUNCTIONS.

Factors are based on the potential demand of general and fire protection service. The bases for the potential demand of general service are the maximum day ratio of 1.6 and the average pumpage for the year ended December 31, 1999. The system demand for fire protection is 8,000 gallons per minute for 4 hours, or 1.92 MGD. The allocation of Fire Protection is based on the relative potential demand, as shown on the following page and summarized below.

Cost Function (1)	Ratio (2)	Rate of Flow, (GPD) (3)	Allocation Factor (4)	Allocation of Fire Protection (5)	Weighted Factor (6)
Average Day	1.00	41,306,849	0.6074		
Maximum Day Extra Capacity	0.60	24,784,110	0.3644		
Subtotal	1.60	66,090,9 59	0.9718		
Fire Protection Private Fire Public Fire		1,920,000	0.0282	0.4097 0.5903	0.0116 0.0166
Total		68,010,959	1.0000	1.0000	0.0282

FACTOR 4. ALLOCATION OF COSTS ASSOCIATED WITH FACILITIES SERVING BASE AND MAXIMUM HOUR EXTRA CAPACITY.

The bases for the potential demand of general service are the maximum hour ratio of 2.4 and the average pumpage for the year ended December 31, 1999. The system demand for fire protection is 8,000 gallons per minute for 4 hours. The allocation of Fire Protection is based on the relative potential demand, as shown on the following page and summarized below.

Cost Function (1)	Ratio (2)	Rate of Flow, (GPM) (3)	Allocation Factor (4)	Allocation of Fire Protection (5)	Weighted Factor (6)
Average Hour	1.00	28,6 85	0.3733		
Maximum Hour Extra Capacity _	1.40	40,159	0.5226		
Subtotal	2.40	68,844	0.8959		
Fire Protection Private Fire Public Fire		8,000	0.1041	0.4097 0.5903	0.0426 0.0615
Total		76,844	1.0000	1.0000	0.1041

FACTORS FOR ALLOCATING COST OF SERVICE TO COST FUNCTIONS

BASIS FOR ALLOCATING DEMAND RELATED COSTS OF FIRE SERVICE TO PRIVATE AND PUBLIC FIRE PROTECTION CUSTOMER CLASSIFICATIONS

The demand for fire protection is assigned to private and public fire service based on the relative potential demands, as follows:

	Restrictive			
	Diameter		Relative	Allocation
	Squared	Quantity	Demand*	Factor
-	(1)	(2)	(3)	(4)
Private Fire Protection:				
2 -inch Fire Line	4	41	246	
3 -inch Fire Line	9	0	0	
4 -inch Fire Line	16	229	5,496	
6 -inch Fire Line	36	616	33,264	
8 -inch Fire Line	64	239	22,944	
10 -inch Fire Line	100	5	750	
12 -inch Fire Line	144	1	216	
16 -inch Fire Line	256	1	384	
Private Hydrants	27.6	649	26,869	
Total Private Fire		1,781	90,169	0.4097
Public Fire Protection:				
4 -1/4 inch w/ 2-2 1/2, 1-4 1/2	20.3	5,041	102,332	
5 -1/4 inch w/ 2-2 1/2, 1-4 1/2	27.6	1,000	27,600	
Total Public Fire		6,041	129,932	0.5903
Total Fire Protection	on	7,822	220,101	1.0000

Relative Demand for Private Fire lines and hydrants are calculated at 1.5 times the Public Fire Relative Demand.

FACTORS FOR ALLOCATING COST OF SERVICE TO COST FUNCTIONS

FACTOR 5. ALLOCATION OF COSTS ASSOCIATED WITH STORAGE FACILITIES.

Factors are based on the potential demand of general and fire protection service using the ratio of the capacity required for a 4-hour demand of fire flow as related to total storage capacity.

The General Service weight is assigned to base and maximum hour extra capacity, based on the maximum hour ratio, as follows:

_	Ratio	Percent	Weight
Base Maximum Hour	1.00	0.4167	0.3691
Extra Capacity	1.40	0.5833	0.5167
Total	2.40	1.0000	0.8858
Private Fire		0.4097	0.0468
Public Fire		0.5903	0.0674
Total Fire		1.0000	0.1142
Total			1.0000

FACTORS FOR ALLOCATING COST OF SERVICE TO COST FUNCTIONS

FACTOR 6. ALLOCATION OF PUMPS AND PUMPING EXPENSES.

_	Maxim	um Day	Maximum E	ay and Fire	Maximu	ım Hour	
Cost Function	Factor 2	Weighted Factor	Factor 3	Weighted Factor	Factor 4	Weighted Factor	Allocation Factor
(1)	(2)	(3)=(2)x 0.5141	(4)	(5)=(4)x 0.3597	(6)	(7)=(6)x 0.1262	(8)=(3)+(5)+(7)
Base Maximum Day Extra Capacity	0.6250 0.3750	0.3213 0.1928	0.6074 0.3644	0.2185 0.1311	0.3733	0.0471	0.5869 0.3239
Maximum Hour Extra Capacity Private Fire Service Public Fire Service			0.0116 0.0166	0.0042 0.0059	0.5226 0.0426 0.0615	0.0659 0.0054 0.0078	0.0659 0.0096 0.0137
Total	1.0000	0.5141	1.0000	0.3597	1.0000	0.1262	1.0000

The weighting of the factors is based on the horsepower of pumps associated with maximum day facilities, maximum day and fire facilities, and maximum hour facilities, as follows:

	Horsepower of Pumps	Weight
Associated with Maximum Day	10,130	0.5141
Associated with Maximum Day and Fire	7,087	0.3597
Associated with Maximum Hour	2,486	0.1262
Total	19,703	1.0000

FACTORS FOR ALLOCATING COST OF SERVICE TO COST FUNCTIONS

FACTOR 7. ALLOCATION OF LINES EXPENSES.

	Transmis	sion Mains	Distributi	ion Mains	
Cost Function	Factor 3	Weighted Factor	Factor 4	Weighted Factor	Allocation Factor
(1)	(2)	(3)=(2)x 0.2511	(4)	(5)=(4)x 0.7489	(6)=(3)+(5)
Base	0.6074	0.1525	0.3733	0.2796	0.4321
Maximum Day Extra Capacity	0.3644	0.0915	0.0000	0.0000	0.0915
Maximum Hour Extra Capacity	0.0000	0.0000	0.5226	0.3914	0.3914
Private Fire Service	0.0116	0.0029	0.0426	0.0319	0.0348
Public Fire Service	0.0166	0.0042	0.0615	0.0461	0.0502
Total =	1.0000	0.2511	1.0000	0.7489	1.0000

The weighting of the factors is based on the total footage of mains, designated as either transmission mains or distribution mains, as follows:

	Total Footage of Mains	Weight
Transmission Mains	2,024,512	0.2511
Distribution Mains	6,037,564	0.7489
Total	8,062,076	1.0000

FACTORS FOR ALLOCATING COST OF SERVICE TO COST FUNCTIONS

FACTOR 8. ALLOCATION OF TRANSMISSION AND DISTRIBUTION OPERATION SUPERVISION SALARIES AND WAGES.

The factors are based on the allocation of other transmission and distribution operating expenses, as follows:

	Transmission	
	& Distribution	
Cost	Operati ng	Allocation
Function	Expenses	Factor
(1)	(2)	(3)
Base	\$332,537	0.4271
Maximum Day Extra Capacity	65,627	0.0843
Maximum Hour Extra Capacity	312,393	0.4012
Private Fire Service	27,841	0.0358
Public Fire Service	40,157	0.0516
Total	\$778,554	1.0000

FACTOR 9. ALLOCATION OF COSTS ASSOCIATED WITH METERS.

These costs are assigned directly to the Customer Facilities - Meters Cost Function.

Cost	Allocation
Function	Factor
(1)	(2)
Meters	1.0000

FACTOR 10. ALLOCATION OF COSTS ASSOCIATED WITH SERVICES.

These costs are assigned directly to the Customer Facilities - Services Cost Function.

Cost	Allocation
Function	Factor
(1)	(2)
Services	1.0000

FACTORS FOR ALLOCATING COST OF SERVICE TO COST FUNCTIONS

FACTOR 11. ALLOCATION OF COSTS ASSOCIATED WITH BILLING AND COLLECTING.

These costs are assigned directly to the Customer Accounting - Billing and Collecting Cost Function.

Cost	Allocation
Function	Factor
(1)	(2)
Billing and Collecting	1.0000

FACTOR 12. ALLOCATION OF COSTS ASSOCIATED WITH METER READING.

These costs are assigned directly to the Customer Accounting - Meter Reading Cost Function.

Cost	Allocation
Function	Factor
(1)	(2)
Meter Reading	1.0000

FACTOR 13. ALLOCATION OF COSTS ASSOCIATED WITH FIRE HYDRANTS.

These costs are assigned directly to Public Fire Service.

Cost	Allocation
Function	Factor
(1)	(2)
Public Fire Service	1.0000

FACTORS FOR ALLOCATING COST OF SERVICE TO COST FUNCTIONS

FACTOR 14. ALLOCATION OF TRANSMISSION AND DISTRIBUTION MISCELLANEOUS MAINTENANCE EXPENSES.

The factors are based on the allocation of other transmission and distribution maintenance expenses.

	Transmission	
	& Distribution	
Cost	Maintenance	Allocation
Function	Expenses	Factor
(1)	(2)	(3)
Base	\$ 186,4 96	0.2279
Maximum Day Extra Capacity	24,413	0.0298
Maximum Hour Extra Capacity	204,113	0.2494
Meters	86,075	0.1052
Services	191,587	0.2341
Private Fire Service	18,319	0.0224
Public Fire Service	107,404	0.1312
Total	\$818,406	1.0000

FACTOR 15. ALLOCATION OF ADMINISTRATIVE AND GENERAL EXPENSES.

The factors are based on the allocation of all other operation and maintenance expenses excluding power, chemicals, waste disposal, and purchased water, as follows:

	Other	
Cost	Operating	Allocation
Function	Expenses	Factor
(1)	(2)	(3)
Base	\$2,480,584	0.3144
Maximum Day Extra Capacity	1,114,215	0.1412
Maximum Hour Extra Capacity	872,844	0.1106
Meters	145,315	0.0184
Services	323,412	0.0410
Billing and Collecting	2,010,144	0.2547
Meter Reading	615,606	0.0780
Private Fire Service	78,922	0.0100
Public Fire Service	250,449	0.0317
Total	\$7,891,490	1.0000

FACTORS FOR ALLOCATING COST OF SERVICE TO COST FUNCTIONS

FACTOR 16. ALLOCATION OF LABOR RELATED TAXES AND BENEFITS.

The factors are based on the allocation of operation and maintenance direct labor expense, as summarized below.

	Direct	
Cost	Labor	Allocation
Function	Expense	Factor
(1)	(2)	(3)
Base	\$1,838,501	0.3084
Maximum Day Extra Capacity	817,649	0.1372
Maximum Hour Extra Capacity	665,857	0.1117
Meters	130,915	0.0220
Services	291,444	0.0489
Billing and Collecting	1,225,731	0.2056
Meter Reading	721,854	0.1211
Private Fire Service	59,7 53	0.0100
Public Fire Service	209,296	0.0351
Total	<u>\$5,961,001</u>	1.0000

FACTOR 17. ALLOCATION OF ORGANIZATION AND OTHER RATE BASE ELEMENTS.

The factors are based on the allocation of utility plant in service, as follows:

Cost	Utility Plant	Allocation
Function	in Service	Factor
(1)	(2)	(3)
Base	\$67,637,256	0.4502
Maximum Day Extra Capacity	31,495,592	0.2096
Maximum Hour Extra Capacity	20,082,738	0.1336
Meters	11,533,324	0.0767
Services	6,011,917	0.0400
Billing and Collecting	2,549,322	0.0170
Meter Reading	780,711	0.0052
Private Fire Service	2,229,507	0.0148
Public Fire Service	7,957,064	0.0529
Total	\$150,277,431	1.0000

FACTORS FOR ALLOCATING COST OF SERVICE TO COST FUNCTIONS

FACTOR 18. ALLOCATION OF TAXES AND UTILITY OPERATING INCOME.

The factors are based on the allocation of original cost rate base, as shown on the following pages and summarized below.

Cost	Original Cost	Allocation
Function	Rate Base	Factor
(1)	(2)	(3)
Base	\$64,856,806	0.4553
Maximum Day Extra Capacity	30,476,270	0.2140
Maximum Hour Extra Capacity	18,652,700	0.1310
Meters	9,807,750	0.0689
Services	5,219,786	0.0366
Billing and Collecting	3,369,612	0.0237
Meter Reading	837,743	0.0059
Private Fire Service	2,035,8 15	0.0143
Public Fire Service	7,171,029	0.0503
Total	\$142,427,511	1.0000

FACTOR 19. ALLOCATION OF OTHER REVENUES.

The factors are based on the allocation of total cost of service, as follows:

Cost	Total Cost	Allocation
Function	of Servi ce	Factor
(1)	(2)	(3)
Base	\$19,912,521	0.4413
Maximum Day Extra Capacity	7,774,874	0.1723
Maximum Hour Extra Capacity	4,869,228	0.1079
Meters	2,132,85 1	0.0473
Services	2,020,537	0.0448
Billing and Collecting	4,607,105	0.1021
Meter Reading	1,525,897	0.0338
Private Fire Service	497,282	0.0110
Public Fire Service	1,781,073	0.0395
Total	\$45,121,368	1.0000

KENTUCKY-AMERICAN WATER COMPANY FACTOR 18. ORIGINAL COST MEASURE OF VALUE FOR THE TWELVE MONTHS ENDING NOVEMBER 30, 2001, ALLOCATED TO COST FUNCTIONS

									Customer A	ccounting	Fire Se	ervice	
		Factor	Original Cost		Extra Ca	apacity	Customer	Facilities	Billing &	Meter	Private	Public	
	Account	Ref.	less Depreciation	Base	Max Day	Max Hour	Meters	Services	Collecting	Reading	Fire	Fire	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
RAT	E BASE												
301	Organization	17	23,020	10,364	4,825	3,075	1,766	921	391	120	341	4.040	
302	Franchise and Consents	17	10,258	4,618	2,150	1,370	787	410	174	53	152	1,218	
303	Other P/E Intangibles	17	24,911	11,215	5,221	3,328	1,911	996	423	130	369	543	
303	6 Other P/E Comprehensive Studies	17	315,759	142,155	66,183	42,185	24,219	12,630	5,368	1,642	4,673	1,318 16,704	
310	Land and Land Rights	2	324,058	202,536	121,522	0	0	0	0	0	4,073	16,704	
311	Source of Supply Struct & Improv	2	157,524	98,453	59,072	ō	0	0	0	0	0	0	
312		1	795,594	795,594	0	ō	0	0	0	0	0	0	
313	Lake, River and Other Intakes	2	191,001	119,376	71,625	Ô	ő	Ô	0	0	0	0	
314	Wells and Springs	2	0	0	0	Ô	0	Ô	0	0	0	0	
316	Supply Mains	2	4,453,081	2,783,176	1,669,905	Ô	0	0	0	0	0	0	
320	* * *	6	81,791	48,003	26,492	5,390	0	Ô	Ô	0	785	1,121	
321	, ,	6	3,539,504	2,077,335	1,146,445	233,253	Ö	Õ	0	0	33,979	48,491	
323	, ,	6	389,027	228,320	126,006	25,637	ő	ő	0	0	3,735	5,330	
325	- · · · · · · · · · · · · · · · · · · ·	6	6,530,415	3,832,701	2,115,201	430,354	ŏ	Ö	0	0	62,692	89,467	
326	, • , ,	6	398,921	234,127	129,211	26,289	ő	Ô	ő	0	3,830	5,465	
330		2	85,472	53,420	32,052	0	n	Ö	Õ	Ö	. 5,000	0,400	
331	J	2	6,051,424	3,782,140	2,269,284	Ô	Ô	ő	ő	Ő	ñ	Ö	
332	,	2	15,523,076	9,701,923	5,821,154	0	ő	0	0	0	0	0	
334	, ,	2	13,323,010	9,701,923	0,021,104	Ô	0	0	0	0	0	0	
		7	3,296,247	1,424,263	301,628	1,290,042	0	0	0	n	114,760	165,554	
340	· · · · · · · · · · · · · · · ·	14	5,296,247 618.649	1,424,263	18,436	154,291	65,082	144,826	0	Ô	13,858	81,167	
341		5	,	1,367,134	18,430	1,913,840	05,002	144,820	. 0	0	173,346	249,647	
342		Đ.	3,703,967	1,307,134	U	1,513,040	U	U	v	U	170,040	240,041	
343		4	00 504 640	10,640,783	0	14,896,526	0	0	0	0	1,214,298	1,753,035	
	10 Inch and under	,	28,504,642		15,961,929	0	0	o o	0	ő	508,118	727,135	
	12 inch and over	3	43,803,319	26,6 06,136	13,301,323	0	0	5,456,717	Ö	ő	0	0.1,130	
345		10	5,456,717	0	0	0	2,447,462	0,400,717	0	0	Ô	ő	
348		9	2,447,462	0	0	0	8,836,612	0	0	. 0	0	ő	
347		9	8,836,612	•	U	•		0	-	0	ŏ	4 512 244	
348	Fire Hydrants	13	4,513,341	0	0	0	0	101.011	0	040.075		4,513,341	
390	.1 Office Structures	15	3,203,523	1,007,188	452,337	354,310	58,945	131,344	815,937	249,875	32,035	101,552	
390	.2 General Structures - HVAC	15	902,690	283,806	127,460	99,838	16,609	37,010	229,915	70,410	9,027	28,615	
390	.3 Miscellaneous Structures & Improv	15	255,648	80,376	36,097	28,275	4,704	10,482	65,114	19,941	2,556	8,104	
391	Office Furniture and Equipment	15	311,425	97,912	43,973	34,444	5,730	12,768	79,320	24,291	3,114	9,872	_
391	.20 Computers & Peripheral Equipment	t 15	837,719	263,379	118,286	92,652	15,414	34,346	213,367	65,342	8,377	26,556	Č
391	.25 Computer Software	15	418,519	131,582	59,095	46,288	7,701	17,159	106,597	32,845	4,185	13,267	Ë
391	.26 Personal Computer Software	15	406,791	127,895	57,439	44,991	7,485	16,678	103,610	31,730	4,068	12,895	Œ
	.30 Other Office Equipment	15	71,601	22,511	10,110	7,919	1,317	2,936	18,237	5,585	716	2,270	۲
392	.11 Transportation Equip-Light Trucks	15	254,053	79,874	35,872	28,098	4,675	10,416	64,707	19,816	2,541	8,053	ē
392	.12 Transportation Equip-Heavy Trucks	15	548,830	172,552	77,495	60,701	10,098	22,502	139,787	42,809	5,488	17,398	П
392	.2 Transportation Equip-Cars	15	161,535	50,787	22,809	17,866	2,972	6,623	41,143	12,600	1,615	5,121	11
	.3 Transportation Equip-Other	15	2,846	895	402	315	52	117	725	222	28	90	

KENTUCKY-AMERICAN WATER COMPANY
FACTOR 18. ORIGINAL COST MEASURE OF VALUE FOR THE TWELVE MONTHS ENDING NOVEMBER 30, 2001, ALLOCATED TO COST FUNCTIONS

								Customer A	ccounting	Fire Se	rvice
	Factor	Original Cost		Extra Ca	apacity	Customer	Facilities	Billing &	Meter	Private	Public
Account	Ref.	less Depreciation	Base	Max Day	Max Hour	Meters	Services	Collecting	Reading	Fire	Fire
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
393 Stores Equipment	15	13,632	4,286	1,925	1,508	251	559	3,472	1,063	136	432
394 Tools, Shop & Garage Equipment	15	415,234	130,550	58,631	45,925	7,640	17,025	105,760	32,388	4,152	13,163
395 Laboratory Equipment	2	558,766	349,229	209,537	Ò	0	0	0	. 0	. 0	. 0
396 Power Operated Equipment	15	267,846	84,211	37,820	29,624	4,928	10,982	68,220	20,892	2,678	8,491
397 Communication Equipment	15	1,533,634	482,175	216,549	169,620	28,219	62,879	390,617	119,623	15,336	48,616
397.2 Communication Equip - Telephone	15	37,808	11,887	5,338	4,182	696	1,550	9,630	2,949	378	1,199
398 Miscellaneous Equipment	15	377,131	118,570	53,251	41,711	6,939	15,462	96,055	29,416	3,771	11,955
399 Other Tangible Property	15	(11,347)	(3,567)	(1,602)	(1,255)	(209)	(465)	(2,890)	(885)	(113)	(360)
354 Collective System Structure SWR	2	6,083	3,802	2,281	0	0	0	0	Ò	0	0
371 Electric Pumping Equipment SWR	6	1,620	951	525	107	0	0	0	0	16	22
Total Depreciable Plant		150,651,379	67,805,607	31,573,972	20,132,697	11,562,005	6,026,874	2,555,679	782,656	2,235,042	7,976,846

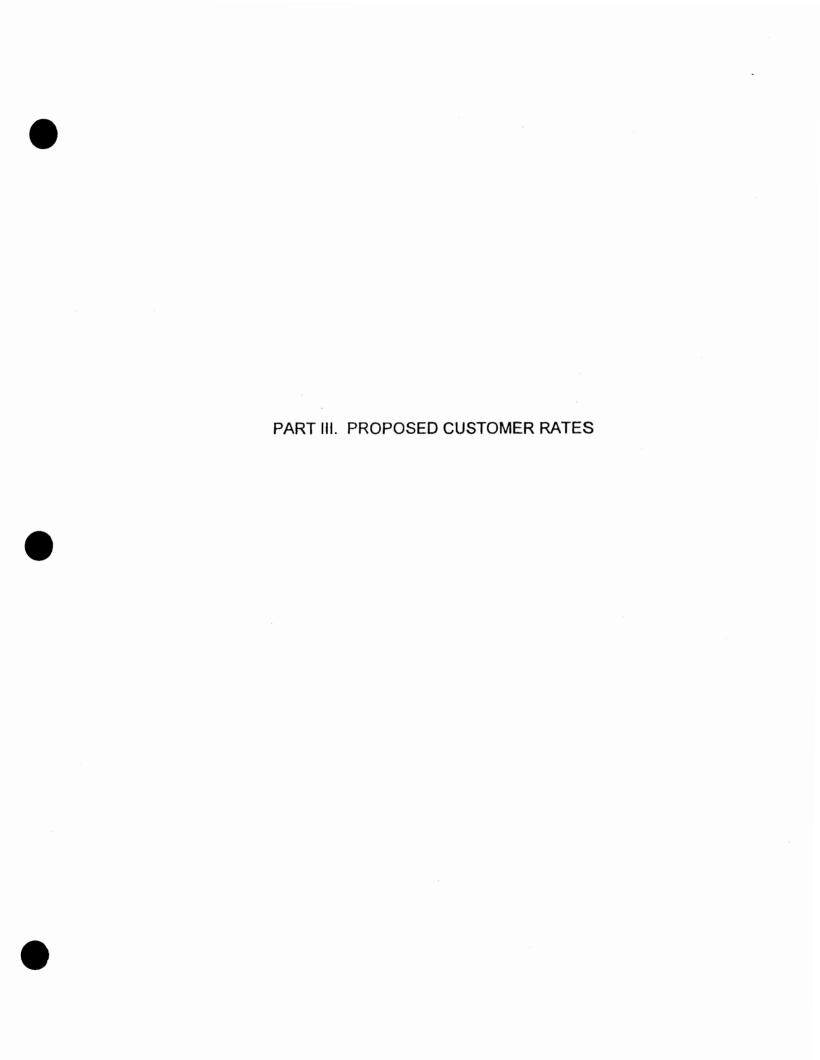
KENTUCKY-AMERICAN WATER COMPANY FACTOR 18. ORIGINAL COST MEASURE OF VALUE FOR THE TWELVE MONTHS ENDING NOVEMBER 30, 2001, ALLOCATED TO COST FUNCTIONS

								Customer Accounting		Fire Service	
	Factor	Original Cost		Extra Ca	apacity	Customer	Facilities	Billing &	Meter	Private	Public
Account	Ref.	less Depreciation	Base	Max Day	Max Hour	Meters	Services	Collecting	Reading	Fire	Fire
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OTHER RATE BASE ELEMENTS											
Utility Plant Acquisition Adjustments	17	175,340	78,938	36,751	23,425	13,449	7.014	2,981	912	2,595	9,275
Accumulated Amortization	17	(7,674)	(3,455)	(1,608)	(1,025)	(589)	(307)	(130)	(40)	(114)	(406)
Construction Work in Progress			, , ,	, , ,	• • • • •	(,	(/	(.00)	(40)	(11-7)	(400)
Mains	7	1,941,274	838,798	177,639	759,751	0	0	0	0	67,586	97,500
Storage Tank	5	33,077	12,209	0	17,091	0	0	0	Ō	1,548	2,229
Services	10	35,960	0	0	0	0	35,960	0	0	0	0
Hydrants	13	46,309	0	0	0	0	0	0	0	0	46,309
Bluegrass Project	2	1,999,966	1,249,979	749,987	0	0	0	0	0	0	. 0
General	15	1,397,548	439,389	197,334	154,569	25,715	57,299	355,955	109,009	13,975	44,302
Working Capital Allowance	15	1,176,000	369,734	166,051	130,066	21,638	48,216	299,527	91,728	11,760	37,279
Other Working Capital Allowance	15	485,820	152,742	68,598	53,732	8,939	19,919	123,738	37,894	4,858	15,400
Deferred Income Taxes	17	(23,598,127)	(10,623,877)	(4,946,167)	(3,152,710)	(1,809,976)	(943,925)	(401,168)	(122,710)	(349,252)	(1,248,341)
Deferred Investment Tax Credits	17	(152,717)	(68,753)	(32,009)	(20,403)	(11,713)	(6,109)	(2,596)	(794)	(2,260)	(8,079)
Deferred Maintenance		, , ,					• • •	•	• •		
Source of Supply	2	35,706	22,316	13,390	0	0	0	0	0	0	0
Treatment Plant	2	2,271,143	1,419,464	851,679	0	0	0	0	0	0	0
Pumping Plant	6	52,716	30,939	17,075	3,474	0	0	0	0	506	722
Distribution Reservoir	5	1,171,888	432,544	0	605,515	0	0	0	0	54,844	78,985
Hydrants	13	140,166	0	0	0	0	0	0	0	0	140,166
Deferred Debits											
Source of Supply	2	1,003	627	376	0	0	0	0 -	0	0	0
Treatment Plant	2	87,290	54,556	32,734	0	0	0	0	0	0	0
Sludge Removal	1	66,769	66,769	0	0	0	0	0	0	0	0
Meters	9	21,156	0	0	0	21,156	0	0	0	0	0
General	15	724,009	227,628	102,230	80,075	13,322	29,684	184,405	56,473	7,240	22,951
Other Rate Base Elements											
Employee Related	16	(960,884)	(296,337)	(131,833)	(107,331)	(21,139)	(46,987)	(197,558)	(116,363)	(9,609)	(33,727)
Other	17	(196,303)	(88,376)	(41,145)	(26,226)	(15,056)	(7,852)	(3,337)	(1,021)	(2,905)	(10,384)
KRS II Costs	2	456,521	285,326	171,195	` o	Ò	` o	o o	0	O	0
KRS Residuals Project Costs	2	561,834	351,146	210,688	0	0	0	0	0	0	0
Bluegrass Water Project Pipeline Related C	_	3,358,227	2,098,892	1,259,335	ñ	0	0	0	0	0	n
Community Education Costs	11	452,115	0	0			0	452,115	0	<u>ō</u>	0
Total Other Rate Base Elements		(8,223,868)	(2,948,801)	(1,097,702)	(1,479,998)	(1,754,256)	(807,088)	813,932	55,087	(199,227)	(805,816)
Total Original Cost Measure of Value		142,427,511	64,856,806	30,476,270	18,652,700	9,807,750	5,219,786	3,369,612	837,743	2,035,815	7,171,029

KENTUCKY-AMERICAN WATER COMPANY

SUMMARY OF AVERAGE DAILY SEND OUT AND MAXIMUM DAY AND HOUR USAGE FOR THE YEARS 1990 - 1999

	ا م											
ourly Use	Ratio to Average	(8)	2.14	2.36	2.21	2.02	1.78	2.05	2.32	1.71	2.51	2.49
Maximum Hourly Use	MGD	(2)	88.36	95.69	87.25	78.92	70.77	81.10	90.95	62.38	92.50	85.60
	Highest Use Day	(9)	8/11	9/14	7/18	6/30	7/14	6/16	8/2	7/13	2/8	6/2
Maximum Daily Use	Ratio to Average	(2)	1.48	1.60	1.54	1.37	1.60	1.47	1.54	1.30	1.53	1.69
	MGD	(4)	61.18	64.67	02.09	53.70	63.77	58.36	60.39	47.22	56.42	58.05
Average Daily	Send Out (MGD)	(3)	41.31	40.55	39.50	39.08	39.86	39.65	39.15	36.45	36.85	34.40
Annual	Send Out (MG)	(2)	15,077	14,799	14,419	14,265	14,549	14,471	14,290	13,303	13,450	12,557
	Year	Ē	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990



COMPARISON OF PRESENT AND PROPOSED RATES

SERVICE CLASSIFICATION NO. 1

Meter Rates:

	Present	Proposed	Present	Proposed		
Customer	Rates Per	Rates Per	Rates Per	Rates Per		
Classification	1000 Gals.	1000 Gals.	100 Cu. Ft.	100 Cu. Ft.		
Residential	\$ 2.07293	\$ 2.46267	\$ 1.55470	\$ 1.84700		
Commercial	1.95612	2.17733	1.46709	1.63300		
Industrial	1.56641	1.86533	1.17481	1.39900		
Public Authority	1.87384	2.06800	1.40538	1.55100		
Sales for Resale	1.79261	2.06800	1.34446	1.55100		

Service Charges:

	Per Month			Per Quarter (1)				
Size of Meter	Present	Proposed	Pre	Present		<u>Proposed</u>		
5/8"	\$ 6.83	\$ 7.50	\$	-	\$	-		
3/4"	10.24	11.25		-		-		
1"	17.06	18.75		-		-		
1-1/2"	34.13	37.50		-		-		
2"	54.60	60.00		-		-		
3"	102.38	112.50		-		-		
4"	170.63	187.50		-		-		
6"	341.26	375.00		-		-		
8"	546.02	600.00		-		-		

SERVICE CLASSIFICATION NO. 3

Rates for Private Fire Connections:

	Per Month					Per Annum			
	<u>P</u>	resent	t <u>Proposed</u>		Ī	<u>Present</u>		Proposed	
2" Diameter	\$	4.00	\$	4.00	\$	48.00	\$	48.00	
4" Diameter		16.00		16.00		192.00		192.00	
6" Diameter		35.96		35.96		431.52		431.52	
8" Diameter		63.92		63.92		767.04		767.04	
10" Diameter		99.88		99.88		1,198.56		1,198.56	
12" Diameter		143.85		143.85		1,726.20		1,726.20	
14" Diameter		195.82		195.82		2,349.84		2,349.84	
16" Diameter		255.70		255.70		3,068.40		3,068.40	

COMPARISON OF PRESENT AND PROPOSED RATES

SERVICE CLASSIFICATION NO. 4:

	Per Month				Per Annum				
	Pre	esent	Pro	posed		<u>P</u>	resent	Pr	oposed
Rates for Public Fire Service									
For Each Public Fire Hydrant	\$	23.96	\$	23.96		\$	287.52	\$	287.52
Rates for Private Fire Service									
For Each Private Fire Hydrant	\$	35.96	\$	35.96		\$	431.52	\$	431.52
SERVICE CLASSIFICATION NO. 6:									
Hidden Leak Adjustment Rate:									
Customer		esent		posed			resent	Pr	oposed
<u>Classification</u>	Rates Per		Rates Per			Rates Per		Rates Per	
Residential Commercial	\$ 0.	<u>) Gals.</u> .51823 .48903	\$ 0.	<u>) Gals.</u> .61567 .54433		\$ (0.38868 0.36677	\$	0.46175 0.40825

⁽¹⁾ The company is proposing to eliminate quarterly service charges due to initiating monthly meter reading and billing for all customers.

CALCULATION OF MONTHLY SERVICE CHARGES

Cost Function (1)	Cost of Service (Schedule D) (2)	Number of Units (3)	Description (4)	Per Unit Month (5)
Meters	\$2,103,496	119,289	5/8-inch meter equivalents	\$ 1.47
Services	1,992,734	106,742	3/4-inch service equivalents	1.56
Billing & Collecting	3,844,518	100,255	Number of customers	3.20
Meter Reading	1,504,920	99,987	No. of metered customers	1.25
Public Fire Deficiency	24,732	99,987	No. of metered customers	 0.02
Total	\$9,445,668			\$ 7.50

Meter Size	Capacity Ratio	Rate Per Month
5/8-inch	1.0	\$ 7.50
3/4-inch	1.5	11.25
1-inch	2.5	18.75
1-1/2-inch	5.0	37.50
2-inch	8.0	60.00
3-inch	15.0	112.50
4-inch	25.0	187.50
6-inch	50.0	375.00
8-inch	80.0	600.00