ACCOUNT 311.4 PUMPING EQUIPMENT - TRANSMISSION AND DISTRIBUTION

SUMMARY OF BOOK SALVAGE

		COST O	F	GROSS		NET	
	REGULAR	REMOVA:	L	SALVAG	E	SALVAGE	2
YEAR	RETIREMENTS	AMOUNT	PCT	TRUOMA	PCT	TNUOMA	PCT
2005	12,403		0		0		0
2006	2,179		0		0		0
2007	53,731		0		0		0
2008	33,832		О		0		0
2009	51,409		0		0		0
2010	80,241		0		0		0
TOTAL	233,795		0		0		0
THREE-YE	CAR MOVING AVERAG	ES					
05-07	22,771		0		0		0
06-08	29,914		0		0		0
07-09	46,324		0		0		0
08-10	55,161		0		0		0
FIVE-YEA	AR AVERAGE						
06-10	44,278	·	0		0		0

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ACCOUNT 320.0 WATER TREATMENT EQUIPMENT

	REGULAR	COST O REMOVA		GROSS SALVAG		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2005	4,608		0		0		0
2006	3,612		0		0		0
2007	15,800		0		0		0
2008	4,079		0		0		0
2009	15,853		0		0		0
2010	6,954		0		0		0
TOTAL	50,906		0		0		0
THREE-YE	CAR MOVING AVERAGI	ES					
05-07	8,007		0		0		0
06-08	7,830		0		0		0
07-09	11,911		0		0		0
08-10	8,962		0		0		0
FIVE-YEA	R AVERAGE						
06-10	9,260		0		0		0

ACCOUNT 330.0 DISTRIBUTION RESERVOIRS AND STANDPIPES

	REGULAR	COST OF REMOVAL		GROSS SALVAGI	Ξ	NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2005	365,036		0		0		0
2006	320,067		0		0		0
2007	181,349	36,234	20		0	36,234-	20-
2008	24,802		0		0		0
2009	15,276		0		0		0
2010	197,835		0		0		0
TOTAL	1,104,365	36,234	3		0	36,234-	3-
THREE-YE	AR MOVING AVERAG	ES					
05-07	288,817	12,078	4		0	12,078-	4 -
06-08	175,406	12,078	7		0	12,078-	
07-09	73 , 809	12,078	16		0	12,078-	16-
08-10	79,305		0		0		0
FIVE-YEA	R AVERAGE						
06-10	147,866	7,247	5		0	7,247-	5-

ACCOUNT 331.0 TRANSMISSION AND DISTRIBUTION MAINS

		COST O	F	GROSS		NET	
	REGULAR	REMOVA	L	SALVAG	E	SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2005	34,578		0		0		0
2006	77,799		0		0		0
2007	80,335		0		0		0
2008	43,195		0		0		0
2009	35,558		0		0		0
2010	63,687		0		0		0
TOTAL	335,153		0		0		0
THREE-YE	CAR MOVING AVERAG	ES					
05-07	64,237		0		0		0
06-08	67,110		0		0		0
07-09	53,029		0		0		0
08-10	47,480		0		0		0
FIVE-YEA	AR AVERAGE						
06-10	60,115		0		0		0

ACCOUNT 333.0 SERVICES

SUMMARY OF BOOK SALVAGE

	2000	COST O		GROSS		NET	
	REGULAR	REMOVA		SALVAG		SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2005	262-		0		0		0
2006							
2007	29,875		0		0		0
2008	139,000		0		0		0
2009	400,082		0		0		0
2010							
TOTAL	568,695		0		0		0
THREE-YE	CAR MOVING AVERAG	ES					
05-07	9,871		0		0		0
06-08	56,292		0		0		0
07-09	189,652		0		. 0		0
08-10	179,694		O		0		0
FIVE-YEA	AR AVERAGE						
06-10	113,791		0		0		0
00 10	110,101		V		O		U

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ACCOUNT 334.0 METERS AND METER INSTALLATIONS

SUMMARY OF BOOK SALVAGE

	REGULAR	COST OF REMOVAI		GROSS SALVAGI	Ε	NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2005	14,656		0		0		0
2006	68,893		0		0		0
2007							
2008	462		0		0		0
2009							
2010	87 , 395		0		0		0
TOTAL	171,406		0		0		0
THREE-YE	AR MOVING AVERAGE	ES					
05-07	27,850		0		0		0
06-08	23,119		0		0		0
07-09	154		0		0		0
08-10	29,286		0		0		0
FIVE-YEA	R AVERAGE						
			0		0		0
06-10	31,350		U		U		U

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ACCOUNT 335.0 FIRE HYDRANTS

	REGULAR	COST O REMOVA		GROSS SALVAG		NET SALVAGE	,
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2005	2,430		0		0		0
2006	1,244		0		0		0
2007	1,150		0		0		0
2008	1,965		0		0		0
2009	8,129		0		0		0
2010							
TOTAL	14,918		0		0		0
THREE-YE	AR MOVING AVERAG	ES					
05-07	1,608		0		0		0
06-08	1,453		0		0		0
07-09	3,748		0		0		0
08-10	3,364		0		0		0
FIVE-YEA	R AVERAGE						
06-10	2,497		0		0		0

ACCOUNT 341.0 TRANSPORTATION EQUIPMENT

	REGULAR	COST O REMOVA		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2005	47,180		0	7,051	15	7,051	15
2006	182,548		0		0		0
2007	179,167		0	4,926	3	4,926	3
2008	86,038		0		0		0
2009	60,644		0		0		0
2010							
TOTAL	555 , 578		0	11,977	2	11,977	2
THREE-YE	CAR MOVING AVERAG	ES					
05-07	136,298		0	3,992	3	3,992	3
06-08	149,251		0	1,642	1	1,642	1
07-09	108,617		0	1,642	2	1,642	2
08-10	48,894		0		0		0
FIVE-YEA	AR AVERAGE						
06-10	101,680		0	985	1	985	1

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DEPRECIATION CALCULATIONS

ACCOUNT 304.2 STRUCTURES AND IMPROVEMENTS - SOURCE OF SUPPLY AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
1955	77.85	72	82			
1968	1,125.00	910	1,181			
1973	1,817.18	1,349	1,908			
1975	3,852.00	2,745	4,045			
1978	4,671.00	3,105	4,905			
1979	3,475.00	2,252	3,649			
1980	3,123.00	1,972	3,279			
1981	3,862.00	2,372	4,055			
1984	39,109.51	21,920	38,144	2,921	20.98	139
1985	15,940.00	8,640	15,035	1,702	21.77	78
1986	3,064.00	1,604	2,791	426	22.57	19
1987	398.00	201	350	68	23.38	3
1993	7,864.00	3,029	5,271	2,986	28.49	105
1997	20,323.00	6,127	10,662	10,677	32.08	333
1998	29,472.56	8,252	14,360	16,586	33.00	503
1999	64,020.95	16,537	28 , 776	38,446	33.93	1,133
2000	125,063.40	29,590	51,490	79,827	34.86	2,290
2001	280,686.84	60,188	104,735	189,986	35.81	5,305
2002	252,056.15	48,520	84,431	180,228	36.75	4,904
2003	927,434.14	157,757	274,517	699,289	37.71	18,544
2004	173,144.62	25,574	44,502	137,300	38.67	3,551
2005	454,428.17	56,938	99,079	378,071	39.63	9,540
2006	393,772.25	40,428	70,350	343,111	40.60	8,451
2007	457,755.45	36 , 635	63 , 750	416,893	41.57	10,029
2008	217,112.27	12,411	21,596	206,372	42.55	4,850
2009	100,099.26	3,434	5,976	99,128	43.53	2,277
2010	7,344.42	8 4	146	7,566	44.51	170
	3,591,092.02	552,646	959,065	2,811,582		72,224

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 38.9 2.01

ACCOUNT 304.3 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1954	74.39	63	78			
1956	546.69	456	574			
1960	259.79	206	273			
1963	3,210.78	2,446	3,371			
1964	1,183.00	887	1,242			
1965	4,134.09	3,053	4,341			
1967	4,224.33	3,015	4,436			
1968	16,348.05	11,463	17,165			
1969	2,935.38	2,021	3 , 082			
1970	13,319.28	8,994	13,985			
1971	56,401.52	37,331	59,222			
1972	12,514.11	8,113	13,140			
1973	46,897.14	29,751	49,242			
1974	28,081.86	17,424	29,486			
1975	15,339.31	9,298	16,018	88	23.25	4
1976	12,030.13	7,117	12,261	371	24.01	15
1977	23,178.47	13,377	23,045	1,292	24.77	52
1978	20,450.29	11,498	19,808	1,665	25.55	65
1979	69,983.88	38,291	65,964	7,519	26.34	285
1980	63,972.64	34,026	58,617	8 , 554	27.14	315
1981	73,800.68	38,125	65 , 678	11,813	27.94	423
1982	38,808.36	19,441	33,491	7,258	28.76	252
1983	98,371.47	47,720	82,208	21,082	29.59	712
1984	126,040.03	59,145	101,890	30,452	30.42	1,001
1985	129,999.05	58,918	101,499	35,000	31.26	1,120
1986	99,804.35	43,613	75,133	29,662	32.11	924
1987	45,258.04	19,035	32,792	14,729	32.97	447
1988	46,737.94	18,881	32,527	16,548	33.84	489
1989	43,777.82	16,949	29,198	16,769	34.72	483
1990	60,132.09	22,271	38,367	24,772	35.60	696
1991	24,419.17	8,629	14,865	10,775	36.49	295
1992	15,369.99	5,167	8,901	7,237	.37.39	194
1993	46,717.63	14,895	25,660	23,394	38.30	611
1994	38,583.64	11,631	20,037	20,476	39.21	522
1995	42,788.88	12,147	20,926	24,002	40.13	598
1996	46,760.80	12,444	21,437	27,662	41.06	674
1997	91,789.04	22,798	39,274	57,104	41.99	1,360
1998	111,094.26	25,599	44,100	72,549	42.93	1,690
1999	69,539.67	14,776	25,455	47,562	43.87	1,084
2000	127,713.92	24,845	42,801	91,299	44.81	2,037
2001	254,582.63	44,860	77,281	190,031	45.77	4,152
2002	536,610.63	84,826	146,131	417,310	46.72	8,932

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ACCOUNT 304.3 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
2003	257,802.15	35,978	61,980	208,712	47.69	4,376
2004	1,869,240.22	226,594	390,357	1,572,345	48.65	32,320
2005	24,718.23	2,539	4,374	21,580	49.62	435
2006	206,782.99	17,409	29 , 990	187,132	50.59	3,699
2007	105,627.03	6,916	11,914	98,994	51.57	1,920
2008	57,689.83	2 , 709	4,667	55 , 907	52.54	1,064
2009	25,159.04	711	1,225	25,192	53.52	471
2010	25,590.15	239	412	26,458	54.51	485
	5,136,394.86	1,158,640	1,979,920	3,413,295		74,202

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 46.0 1.44

ACCOUNT 304.4 STRUCTURES AND IMPROVEMENTS - TRANSMISSION AND DISTRIBUTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
1954	835.00	781	877			
1968	1,209.00	1,000	1,246	23	8.48	3
1970	1,741.00	1,402	1,747	81	9.33	9
1971	1,741.00	1,381	1,720	108	9.79	11
1973	2,262.00	1,736	2,163	212	10.77	20
1975	10,395.00	7,684	9 , 572	1,343	11.84	113
1976	5,316.00	3,850	4,796	786	12.41	63
1978	6,638.00	4,602	5 , 733	1,237	13.59	91
1979	664.00	450	561	136	14.21	10
1980	11,302.00	7,461	9,295	2,572	14.85	173
1981	1,202.00	773	963	299	15.50	19
1982	305.00	191	238	82	16.17	5
1984	17,492.50	10,304	12,836	5,531	17.56	315
1985	5,543.32	3,162	3,939	1,881	18.27	103
1987	10,778.81	5,732	7,141	4,177	19.74	212
1988	2,580.61	1,322	1,647	1,063	20.49	52
1989	2,958.62	1,456	1,814	1,293	21.25	61
1990	2,691.10	1,269	1,581	1,245	22.03	57
1992	656.00	282	351	338	23.62	14
1993	5,179.00	2,117	2,637	2,801	24.43	115
1997	5,602.00	1,798	2,240	3,642	27.77	131
1998	19,524.72	5 , 827	7,259	13,242	28.63	463
1999	86,090.51	23,729	29,561	60,834	29.50	2,062
2000	22,285.99	5,634	7,019	16,381	30.37	539
2001	214,003.60	49,098	61,165	163,539	31.26	5,232
2002	178,781.25	36,840	45,894	141,826	32.15	4,411
2003	94,772.68	17,290	21,539	77,972	33.05	2,359
2004	44,191.59	7,007	8,729	37,672	33.96	1,109
2005	201,521.34	27,137	33,806	177,791	34.87	5,099
2006	508,619.92	56,209	70,023	464,028	35.79	12,965
2007	214,810.11	18,495	23,041	202,510	36.72	5,515
2008	336,357.03	20,749	25,848	327,327	37.65	8,694
2009	68,146.32	2,522	3,142	68,412	38.59	1,773
2010	4,011.11	49	61	4,151	39.53	105
	2,090,208.13	329,339	410,184	1,784,535		51,903

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 34.4 2.48

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ACCOUNT 304.5 STRUCTURES AND IMPROVEMENTS - GENERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
1955	143.68	127	144			
1968	1,194.00	920	1,194			
1969	1,400.00	1,062	1,394	6	10.85	1
1970	3,414.76	2,549	3,346	69	11.41	6
1971	1,142.00	838	1,100	42	11.98	4
1972	1,296.00	934	1,226	70	12.57	6
1974	42.00	29	38	4	13.82	
1975	769.00	522	685	84	14.46	6
1978	1,367.00	865	1,135	232	16.51	14
1979	321.00	198	260	61	17.22	4
1980	9,988.73	6,007	7,884	2,105	17.94	117
1981	475.10	278	365	110	18.68	6
1982	2,751.00	1,563	2,051	700	19.44	36
1983	1,529.00	843	1,106	423	20.20	21
1984	5,349.09	2,855	3,747	1,602	20.98	76
1985	334.00	172	226	108	21.77	5
1986	4,371.00	2,179	2,860	1,511	22.57	67
1987	12,182.38	5,853	7,682	4,500	23.38	192
1988	999.00	462	606	393	24.21	16
1989	8,665.00	3,843	5,044	3,621	25.04	145
1990	332.83	141	185	148	25.89	6
1991	379.00	154	202	177	26.74	7
1993	561.95	206	270	292	28.49	10
1997	4,606.00	1,322	1,735	2,871	32.08	89
1998	66, 888.46	17,837	23,411	43,477	33.00	1,317
1999	208,895.99	51,388	67,446	141,450	33.93	4,169
2000	11,059.47	2,492	3,271	7,788	34.86	223
2001	368,898.98	75,337	98 , 879	270,020	35.81	7,540
2002	573,994.25	105,230	138,113	435,881	36.75	11,861
2003	188,242.23	30,495	40,024	148,218	37.71	3,930
2004	430,017.37	60,491	79,394	350,623	38.67	9,067
2005	464,183.57	55,391	72,700	391,484	39.63	9,878
2006	510,451.99	49,912	65,510	444,942	40.60	10,959
2007	69,729.94	5,315	6,976	62,754	41.57	1,510
2008	93,370.04	5,083	6,671	86,699	42.55	2,038
2009	67,087.31	2,192	2,877	64,210	43.53	1,475
2010	81,085.42	883	1,159	79,926	44.51	1,796
	3,197,518.54	495,968	650,916	2,546,60 3		66,597

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 38.2 2.08

ACCOUNT 305 COLLECTING AND IMPOUNDING RESERVOIRS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
2004	6,982.99	708	817	6,166	53.92	114
	6,982.99	708	817	6,166		114
C	OMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	r 54.1	1.63

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ACCOUNT 306 LAKE, RIVER AND OTHER INTAKES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED · (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA /AGE PERCENT					
2004 2006	4,793.86 28,152.46	515 2,102	808 3,300	3,986 24,852	53.56 55.52	74 448
	32,946.32	2,617	4,108	28,838		522

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 55.2 1.58

ACCOUNT 307 WELLS AND SPRINGS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
1954	657.25	588	690			
1955	3,197.64	2,834	3,358			
1956	8,330.00	7,319	8,746			
1960	853.75	720	896			
1961	866.38	722	910			
1963	5, 793.33	4,706	6,083			
1964	4,481.00	3,590	4,705			
1965	9,810.94	7,749	10,301			
1967	18,273.81	13,992	19,188			
1968	131,119.11	98,741	137,675			
1969	13,895.00	10,286	14,451	139	14.75	9
1970	94,057.65	68,362	96,043	2,718	15.39	177
1971	79,617.00	56,796	79,794	3,804	16.03	237
1972	122,329.86	85,545	120,184	8,262	16.70	495
1973	292,081.49	200,082	281,100	25,586	17.38	1,472
1974	170,155.80	114,095	160,295	18,369	18.07	1,017
1975	85,152.77	55,846	78,459	10,951	18.77	583
1976	189,520.04	121,427	170,596	28,400	19.49	1,457
1977	97,543.49	61,002	85,703	16,718	20.22	827
1978	93,752.31	57,154	80,297	18,143	20.97	865
1979	252,216.72	149,786	210,438	54,390	21.72	2,504
1980	209,736.14	121,167	170,230	49,993	22.49	2,223
1981	358,354.93	201,231	282,714	93,559	23.26	4,022
1982	246,144.12 400,209.23	134,136	188,451	70,000	24.05	2,911
1983 1984	702,938.09	211,371 359,300	296,960 504,789	123,260 233,296	24.85 25.66	4,960
1985	923,754.10	456,261	641,012	328,930	26.48	9,092
1986	587,146.40	279,769	393,054	223,450	27.31	12,422 8,182
1987	233,111.69	106,963	150,275	94,492	28.15	3,357
1988	177,979.76	78,489	110,271	76,608	29.00	2,642
1989	202,892.99	85,812	120,559	92,479	29.86	3,097
1990	230,836.74	93,413	131,238	111,141	30.73	3,617
1991	135,178.70	52,233	73,383	68,555	31.60	2,169
1992	55,268.22	20,323	28,552	29,480	32.49	907
1993	245,801.61	85,790	120,528	137,564	33.38	4,121
1994	164,414.44	54,276	76,254	96,381	34.28	2,812
1995	152,980.78	47,579	66,845	93,785	35.19	2,665
1996	308,042.66	89,853	126,237	197,208	36.11	5,461
1997	546,557.60	148,866	209,145	364,740	37.03	9,850
1998	1,169,614.53	295,725	415,471	812,624	37.96	21,407
1999	1,628,948.18	380,050	533,941	1,176,455	38.89	30,251
2000	1,332,355.70	284,271	399,379	999,594	39.84	25,090

AT-GRAY 000667

ACCOUNT 307 WELLS AND SPRINGS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIV	OR CURVE IOWA	50-R3				
NET SA	ALVAGE PERCENT	- 5				
2001	2,615,014.93	506,319	711,339	2,034,427	40.78	49,888
2002	3,150,557.65	546,496	767,785	2,540,301	41.74	60,860
2003	2,898,256.28	444,911	625,066	2,418,103	42.69	56,643
2004	3,100,152.56	412,754	579 , 888	2,675,272	43.66	61,275
2005	2,403,142.50	271,507	381,447	2,141,853	44.62	48,002
2006	2,150,365.97	199,145	279,783	1,978,101	45.59	43,389
2007	1,985,459.94	143,013	200,922	1,883,811	46.57	40,451
2008	2,791,361.87	144,202	202,593	2,728,337	47.54	57,390
2009	718,343.85	22,326	31,366	722,895	48.52	14,899
2010	223,140.37	2,296	3,226	231,071	49.51	4,667
	33,721,767.87	7,401,189	10,392,615	25,015,241		608,365

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 41.1 1.80

III-96 AT-GRAY 000668

ACCOUNT 309 SUPPLY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	DR CURVE IOWA LVAGE PERCENT					
1963	873.95	653	961			
1971	1,240.00	815	1,259	105	24.15	4
1973	476.00	301	465	59	25.54	2
1975	520.00	315	487	85	27.00	3
1976	11,171.00	6,605	10,202	2,086	27.75	75
1981	114.00	59	91	34	31.75	1
1984	38,505.00	18,121	27,989	14,366	34.33	418
1985	166.00	75	116	67	35.21	2
1993	2,181.00	693	1,070	1,329	42.66	31
1999	102,027.44	21,455	33,138	79,092	48.53	1,630
2000	77,470.00	14,885	22,990	62,227	49.52	1,257
2001	468,390.08	81,494	125,871	389,358	50.51	7,709
2002	36, 260.59	5,644	8,717	31,170	51.51	605
2003	174,891.82	24,048	37,143	155,238	52.50	2,957
2004	186,454.27	22,218	34,317	170,783	53.50	3,192
2005	272,823.94	27,511	42,492	257,614	54.50	4,727
2006	336,807.89	27 , 787	42,918	327,571	55.50	5,902
2007	193,087.37	12,389	19,135	193,261	56.50	3,421
2008	437,234.07	20,041	30,954	450,003	57.50	7,826
	2,340,694.42	285,109	440,315	2,134,449		39,762

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 53.7 1.70

III-97 AT-GRAY 000669

ACCOUNT 310.2 POWER GENERATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA VAGE PERCENT					
2000	7,266.57	2,505	2,704	4,563	19.66	232
2001	67 , 167.79	21,024	22 , 693	44,475	20.61	2,158
2002	168,497.17	47,348	51,106	117,391	21.57	5,442
2003	147,234.75	36,613	39,519	107,716	22.54	4,779
2004	20,574.07	4,444	4,797	15 , 777	23.52	671
2005	73,341.20	13,421	14,486	58 , 855	24.51	2,401
2006	240,558.31	36,084	38,948	201,610	25.50	7,906
2007	95,024.23	11,086	11,966	83 , 058	26.50	3,134
2008	442,475.15	36,871	39 , 797	402,678	27.50	14,643
2009	8,550.00	428	462	8,088	28.50	284
2010	126,599.01	2,110	2,277	124,322	29.50	4,214
	1,397,288.25	211,934	228,755	1,168,533		45,864

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.5 3.28

ACCOUNT 311.2 PUMPING EQUIPMENT - SOURCE OF SUPPLY AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
			, ,	, ,	, ,	. ,
	CURVE IOWA AGE PERCENT					
1954	1,721.65	1,466	1,808			
1956	1,743.55	1,445	1,831			
1959	719.95	571	756			
1960	474.55	371	498			
1961	268.21	. 207	282			
1963	6,031.45	4,500	6,333			
1964	3,024.00	2,219	3,175			
1965	4,954.98	3 , 575	5,203			
1967	5,389.39	3,754	5,659			
1968	21,601.75	14,768	22,682			
1969	9,320.04	6,252	9,786			
1970	24,743.27	16,274	25 , 980			
1971	20,494.46	13,210	21,519			
1972	16,917.97	10,678	17,764			
1973	52,314.52	32,302	54 , 930			
1974	42,289.13	25 , 532	44,404			
1975	16,842.01	9,933	17,684			
1976	31,803.44	18,302	33,394			
1977	41,865.72	23,493	43,959			
1978	39 , 672.38	21,684	41,656			
1979	42,826.18	22 , 771	44,967			
1980	63 , 716.17	32 , 930	66 , 902			
1981	124,685.96	62,551	130,920			
1982	81,681.21	39 , 738	85 , 765			
1983	97,079.25	45,728	101,933			
1984	168,697.41	76,806	177,132			
1985	244,823.02	107,610	257,064			
1986	63,938.39	27,078	67,135			
1987	96,507.90	39,323	101,333			
1988	56,301.29	22,021	59,116			
1989	53,631.03	20,100	56,313			
1990	51,929.70	18,599	54,526			
1991	53,139.59	18,134	55 , 797	710	04 07	0.0
1992	57,364.59	18,622	59 , 523	710	24.87	29
1993	80,927.97	24,903	79,599	5,375	25.45	211
1994	112,070.99	32,557	104,064	13,611	26.04	523
1995	79,455.18	21,715	69,409	14,019	26.63	526
1996	117,554.49	30,104	96,224	27,208	27.22	1,000
1997	108,762.24	25,981 73 682	83,045	31,155	27.81	1,120
1998	332,403.08 188,771.27	73,682	235,515 123,188	113,508 75, 022	28.40	3,997
1999	422,598.10	38,540 78,886		191,579	29.00	2,587 6,472
2000	444,J30.1U	/O,OOO	252,149	131,379	29.60	6,472

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ACCOUNT 311.2 PUMPING EQUIPMENT - SOURCE OF SUPPLY AND PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA					
0001	000 104 57	150 600	401 060	460 505	20.00	15 015
2001	908,184.57	153,633	491,069	462,525	30.20	15,315
2002	985,596.46	149,478	477 , 788	557 , 088	30.80	18,087
2003	69 7, 437.27	93,574	299 , 098	433,211	31.40	13,797
2004	1,009,533.53	117,481	375,513	684,497	32.01	21,384
2005	298,599.70	29,437	94,092	219,438	32.62	6,727
2006	1,901,069.66	153,582	490,906	1,505,217	33.23	45,297
2007	845,541.55	53,269	170,268	717,551	33.84	21,204
2008	1,083,239.95	48,977	156,549	980,853	34.45	28,472
2009	499,665.48	13,552	43,317	481,332	35.07	13,725
2010	496,364.41	4,487	14,342	506,841	35.69	14,201
	11,766,290.01	1,906,385	5,333,864	7,020,741		214,674

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 32.7 1.82

AQUA TEXAS, INC.

ACCOUNT 311.3 PUMPING EQUIPMENT - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
2000	39,628.49	11,377	17,336	24,274	25.43	955
2001	36,507.38	9,528	14,518	23,815	26.30	906
2002	49,208.08	11,544	17,590	34,078	27.18	1,254
2003	7,478.91	1,553	2,366	5,487	28.08	195
2004	96,528.48	17,433	26,563	74,792	28.98	2,581
2005	6,500.00	998	1,521	5,304	29.88	178
2006	62,064.76	7,820	11,915	53,253	30.80	1,729
2007	22,357.55	2,200	3,353	20,122	31.72	634
2008	1,681.26	119	181	1,584	32.65	49
	321,954.91	62,572	95,343	242,710		8,481

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 28.6 2.63

ACCOUNT 311.4 PUMPING EQUIPMENT - TRANSMISSION AND DISTRIBUTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
			,	, · ,	(- /	(, ,
	OR CURVE IOWALVAGE PERCENT					
		· ·				
1967	1,947.90	1,682	2,045			
1968	10,658.13	9,090	11,191			
1970	11,291.20	9,376	11,856			
1971	7,761.06	6,354	8,149			
1972	8,391.70	6,767	8,811			
1973	10,131.02	8,039	10,638			
1974	4,208.00	3,283	4,418			
1975	19,372.00	14,849	20,341			
1976	11,396.00	8,574	11,966			
1978	4,496.00	3,248	4,721			
1979	18,513.00	13,079	19,439			
1980	12,550.00	8 , 663	13,178			
1981	11,206.00	7,544	11,766			
1982	24,517.00	16,086	25,743			
1983	28,283.75	18,056	29 , 698			
1984	50,716.32	31,449	53,252			
1985	46,896.12	28,194	49,241			
1986	30,930.50	18,002	32,477			
1987	65,919.32	37 , 079	69,215			
1988	63,865.61	34,641	67 , 059			
1989	15,131.24	7,898	15,888			
1990	12,768.11	6,401	13,407			
1991	45,979.00	22,070	48,278			
1992	8,729.00	4,001	9,165			
1993	12,235.00	5 , 337	12,574	273	20.46	13
1995	3,735.00	1,461	3,442	480	21.96	22
1996	18,951.39	6,976	16,436	3,463	22.73	152
1997	53,497.00	18,441	43,448	12,724	23.51	541
1998	111,469.02	35,781	84,302	32,740	24.30	1,347
1999	301,497.59	89,454	210,758	105,814	25.11	4,214
2000	67,163.05	18,295	43,104	27,417	25.92	1,058
2001	776,140.34	192,328	453,134	361,813	26.74	13,531
2002	649,738.97	144,830	341,226	341,000	27.57	12,369
2003	270,565.29	53,410	125,837	158,257	28.42	5,569
2004	739,124.06	127,052	299,341	476,739	29.27	16,288
2005	268,587.71	39,240	92,451	189,566	30.13	6,292
2006	1,484,835.45	178,623	420,844	1,138,233	30.99	36,729
2007	132,375.05	12,430	29,286	109,708	31.87	3,442

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ACCOUNT 311.4 PUMPING EQUIPMENT - TRANSMISSION AND DISTRIBUTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
2008 2009 2010	338,253.91 96,205.03 54,446.34	22,731 3,896 735	53,555 9,179 1,732	301,612 91,836 55,437	32.76 33.65 34.55	9,207 2,729 1,605
	5,904,478.18	1,275,445	2,792,591	3,407,111		115,108

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 29.6 1.95

ACCOUNT 320 WATER TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

SURVIVOR CURVE IOWA 45-R2.5 NET SALVAGE PERCENT10 1954	YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
1964							
1965 624.33 526 687 1967 1,502.51 1,232 1,653 1968 1,668.12 1,347 1,835 1969 208.11 165 229 1970 1,718.39 1,344 1,890 1971 1,237.11 950 1,361 1972 1,070.52 808 1,178 1973 8,569.71 6,341 9,427 1974 5,144.25 3,731 5,659 1975 3,475.94 2,468 3,824 1976 2,825.92 1,962 3,109 1977 5,386.03 3,655 5,925 1978 2,837.30 1,880 3,121 1979 8,587.00 5,546 9,396 50 18.58 3 1980 9,466.21 5,984 10,087 326 19.27 17 1981 16,581.77 10,145 17,187 1,053 19.97 53 1982 3,924.09	1954	129.73	122	143			
1967	1964	91.68	78	101			
1968 1,668.12 1,347 1,835 1969 208.11 165 229 1970 1,718.39 1,344 1,890 1971 1,237.11 950 1,361 1972 1,070.52 808 1,178 1973 8,569.71 6,341 9,427 1974 5,144.25 3,731 5,659 1975 3,475.94 2,468 3,824 1976 2,825.92 1,962 3,109 1977 5,366.03 3,655 5,925 1978 2,837.30 1,880 3,121 1979 8,587.00 5,546 9,396 50 18.58 3 1980 9,466.21 5,954 10,087 326 19.27 17 1981 16,581.77 10,145 17,187 1,658 20,69 18 1982 3,924.09 2,332 3,951 365 20.69 18 1983 14,595.10 8,413 14,253	1965	624.33	526	687			
1969	1967	1,502.51	1,232	1,653			
1970 1,718.39 1,344 1,890 1971 1,237.11 950 1,361 1972 1,070.52 808 1,178 1973 8,569.71 6,341 9,427 1974 5,144.25 3,731 5,659 1975 3,475.94 2,468 3,824 1976 2,825.92 1,962 3,109 1977 5,386.03 3,655 5,925 1978 2,837.30 1,880 3,121 1979 8,587.00 5,546 9,396 50 18.58 3 1980 9,466.21 5,954 10,087 326 19.27 17 1981 16,581.77 10,145 17,187 1,053 19.97 53 1982 3,924.09 2,332 3,951 365 20.69 18 1983 14,595.10 8,413 14,253 1,802 21.42 84 1984 24,394.84 13,620 23,075 3,759 22.16 170 1985 40,184.20 21,699 36,762	1968		1,347	1,835			
1971 1,237.11 950 1,361 1972 1,070.52 808 1,178 1973 8,569.71 6,341 9,427 1974 5,144.25 3,731 5,659 1975 3,475.94 2,468 3,824 1976 2,825.92 1,962 3,109 1977 5,386.03 3,655 5,925 1978 2,837.30 1,880 3,121 1979 8,587.00 5,546 9,396 50 18.58 3 1980 9,466.21 5,954 10,087 326 19.27 17 1981 16,581.77 10,145 17,187 1,053 19.97 53 1982 3,924.09 2,332 3,951 365 20.69 18 1983 14,595.10 8,413 14,253 1,802 21.42 84 1984 24,394.84 13,620 23,075 3,759 22.16 170 1985 40,184.20 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
1972 1,070.52 808 1,178 1973 8,569.71 6,341 9,427 1974 5,144.25 3,731 5,659 1975 3,475.94 2,468 3,824 1976 2,825.92 1,962 3,109 1977 5,386.03 3,655 5,925 1978 2,837.30 1,880 3,121 1979 8,587.00 5,546 9,396 50 18.58 1980 9,466.21 5,954 10,087 326 19.27 17 1981 16,581.77 10,145 17,187 1,053 19.97 53 1982 3,924.09 2,332 3,951 365 20.69 18 1983 14,595.10 6,413 14,253 1,802 21.42 84 1984 24,394.84 13,620 23,075 3,759 22.16 170 1985 40,184.20 21,699 36,762 7,441 22.91 325							
1973							
1974 5,144.25 3,731 5,659 1975 3,475.94 2,468 3,824 1976 2,825.92 1,962 3,109 1977 5,386.03 3,655 5,925 1978 2,837.30 1,880 3,121 1979 8,587.00 5,546 9,396 50 18.58 3 1980 9,466.21 5,954 10,087 326 19.27 17 1981 16,581.77 10,145 17,187 1,053 19.97 53 1982 3,924.09 2,332 3,951 365 20.69 18 1983 14,595.10 8,413 14,253 1,802 21.42 84 1984 24,394.84 13,620 23,075 3,759 22.16 170 1985 40,184.20 21,699 36,762 7,441 22.91 325 1986 10,658.79 5,557 9,414 2,311 23.67 98 1987 <							
1975 3,475.94 2,468 3,824 1976 2,825.92 1,962 3,109 1977 5,386.03 3,655 5,925 1978 2,837.30 1,880 3,121 1979 8,587.00 5,546 9,396 50 18.58 3 1980 9,466.21 5,954 10,087 326 19.27 17 1981 16,581.77 10,145 17,187 1,053 19.97 53 1982 3,924.09 2,332 3,951 365 20.69 18 1983 14,595.10 8,413 14,253 1,802 21.42 84 1984 24,394.84 13,620 23,075 3,759 22.16 170 1985 40,184.20 21,699 36,762 7,441 22.91 32.67 1986 10,658.79 5,557 9,414 2,311 23.67 98 1987 17,209.47 8,649 14,653 4,277 24.44							
1976 2,825.92 1,962 3,109 1977 5,386.03 3,655 5,925 1978 2,837.30 1,880 3,121 1979 8,587.00 5,546 9,396 50 18.58 3 1980 9,466.21 5,954 10,087 326 19.27 17 1981 16,581.77 10,145 17,187 1,053 19.97 53 1982 3,924.09 2,332 3,951 365 20.69 18 1983 14,595.10 8,413 14,253 1,802 21.42 84 1984 24,394.84 13,620 23,075 3,759 22.16 170 1985 40,184.20 21,699 36,762 7,441 22.91 325 1986 10,658.79 5,557 9,414 2,311 23.67 98 1987 17,209.47 8,649 14,653 4,277 24.44 175 1988 7,633.64 3,691							
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	2005	41,871.93					

AT-GRAY 000676

ACCOUNT 320 WATER TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
2006	367,332.80	37,804	64,047	340,019	40.79	8,336
2007	120,203.51	9,667	16,378	115,846	41.71	2,777
2008	329,798.67	18,944	32,094	330,685	42.65	7,753
2009	187,620.20	6,466	10,955	195,427	43.59	4,483
2010	85,111.36	977	1,655	91,967	44.53	2,065
	3,053,199.14	593,712	1,000,911	2,357,608		61,467

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 38.4 2.01

ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA /AGE PERCENT					
1942	52,663.45	47,271	52,226	5,704	9.20	620
1954	46,789.30	37,613	41,555	9,913	13.46	736
1956	1,015.12	799	883	234	14.23	16
1960	537.73	404	446	146	15.84	9
1963	4,736.19	3,427	3,786	1,424	17.11	83
1964	1,843.16	1,316	1,454	573	17.55	33
1965	122,909.45	86,555	95,627	39,573	17.99	2,200
1966	58,522.00	40,633	44,892	19,482	18.44	1,057
1967	18,244.26	12,483	13,791	6, 278	18.90	332
1968	29 ,79 3.78	20,083	22,188	10,585	19.36	547
1969	323.78	215	238	118	19.84	6
1970	69,411.76	45,323	50,074	26,279	20.32	1,293
1971	53,488.21	34,361	37,963	20,874	20.80	1,004
1972	104,463.46	65 , 958	72 , 871	42,039	21.30	1,974
1973	208 ,388. 26	129,238	142,784	8 6, 443	21.81	3,963
1974	90,755.72	55,267	61,060	38,771	22.32	1,737
1975	100,508.24	60,034	66,327	44,232	22.85	1,936
1976	266,885.45	156,299	172,682	120,892	23.38	5,171
1977	106,877.40	61,322	67,749	49,816	23.92	2,083
1978	218,227.26	122,522	135,364	104,686	24.48	4,276
1979	259,280.33	142,376	157,299	127,909	25.04	5,108
1980	238,685.41	128,021	141,440	121,114	25.62	4,727
1981	543,238.77	284,320	314,121	283,442	26.21	10,814
1982	284,971.75	145,387	160,626	152,843	26.81	5,701
1983	226,586.98	112,559	124,357	124,889	27.42	4,555
1984	433,488.73	209,427	231,378	245,460	28.04	8,754
1985	613,088.27	287,563	317,704	356,693	28.68	12,437
1986	441,798.34	200,903	221,961	264,017	29.33	9,002
1987	217,502.50	95,749	105,785	133,468	29.99	4,450
1988	159,570.39	67,859	74,972	100,555	30.67	3,279
1989	486,808.68	199,631	220,555	314,935	31.36	10,043
1990	187,272.67	73 , 872	81,615	124,385	32.07	3,879
1991	176,536.72	66,840	73,846	120,344	32.79	3,670
1992	117,181.77	42,460	46,910	81,990	33.53	2,445
1993	266,210.72	92,066	101,716	191,116	34.28	5,575
1994	491,972.37	161,810	178,770	362,400	35.05	10,340
1995	258,488.24	80,581	89,027	195,310	35.83	5,451
1996	200,678.45	58,983	65,165	155,581	36.64	4,246
1997	983,580.69	271,567	300,032	781,907	37.45	20,879
1998	1,083,297.82	279,079	308,331	883,297	38.29	23,069
1999	702,440.14	167,827	185,418	587,266	39.14	15,004
2000	436,675.45	95, 973	106,032	374,311	40.01	9,355

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ACCOUNT 330 DISTRIBUTION RESERVOIRS AND STANDPIPES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIV	OR CURVE IOWA	50-S1				
NET SA	ALVAGE PERCENT	-10				
2001	2,482,308.67	496,958	549,047	2,181,493	40.90	53, 337
2002	2,398,676.76	432,721	478 , 077	2,160,467	41.80	51,686
2003	939,723.01	150,713	166,510	867,185	42.71	20,304
2004	1,957,074.80	273,403	302 , 060	1,850,722	43.65	42,399
2005	1,781,337.60	212,015	234,238	1,725,233	44.59	38,691
2006	1,637,236.24	159,925	176,688	1,624,272	45.56	35,651
2007	1,051,463.45	80,269	88,682	1,067,928	46.53	22,951
2008	1,017,357.31	55,731	61,573	1,057,520	47.51	22,259
2009	400,157.40	13,205	14,589	425,584	48.50	8,775
2010	341,912.84	3,761	4,155	371,949	49.50	7,514
	24,372,987.25	6,124,677	6,766,639	20,043,647		515,426

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 38.9 2.11

III-107 AT-GRAY 000679

ACCOUNT 331 TRANSMISSION AND DISTRIBUTION MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
1942	51,932.31	48,208	59,722			
1955	24,472.37	19,377	24,112	4,031	23.36	173
1956	38,362.69	29,935	37 , 250	6,867	24.11	285
1958	477.90	362	450	100	25.65	4
1959	8,849.97	6,590	8,200	1,977	26.44	75
1960	18,450.78	13,515	16,818	4,400	27.23	162
1961	127,897.13	92,092	114,596	32,486	28.04	1,159
1963	57,156.95	39,719	49,425	16,305	29.68	549
1965	29,315.52	19,621	24,416	9,297	31.35	297
1967	116,614.59	74,975	93,297	40,810	33.07	1,234
1968	432,286.79	272,164	338,672	158,458	33.94	4,669
1969	98,284.73	60,568	75,369	37,658	34.81	1,082
1970	818,104.08	492,990	613,461	327,359	35.70	9,170
1971	478,999.80	282,107	351,045	199,805	36.59	5,461
1972	608,933.34	350,228	435,813	264,460	37.49	7,054
1973	1,376,709.89	772,610	961,412	621,804	38.40	16,193
1974	527,424.34	288,548	359,060	247,478	39.32	6,294
1975	551,116.43	293,740	365,521	268,263	40.24	6,667
1976	960,698.59	498,487	620,302	484,501	41.16	11,771
1977	1,932,870.30	975,076	1,213,354	1,009,447	42.10	23,977
1978	839,587.76	411,440	511,983	453,543	43.04	10,538
1979	1,249,829.79	594,469	739,739	697,565	43.98	15,861
1980	1,009,658.76	465,523	579 , 282	581,826	44.93	12,950
1981	1,769,898.30	790,278	983,398	1,051,985	45.88	22,929
1982	1,488,631.59	642,777	799,852 534,717	912,074	46.84	19,472
1983 1984	1,030,302.70 1,686,549.73	429,709 678,313	534,717 844,072	650,131	47.80 48.77	13,601
1985	3,391,856.79	1,314,241	1,635,401	1,095,460 2,265,234	49.73	22,462
1986	1,154,901.33	430,144	535,258	792,879	50.71	45,551 15,636
1987	664,703.93	237,678	295,759	468,651	51.68	9,068
1988	684, 386.64	234,437	291,726	495,319	52.66	9,406
1989	1,539,179.98	504,112	627,301	1,142,756	53.64	21,304
1990	740,642.03	231,443	288,001	563,737	54.62	10,321
1991	1,015,805.67	302,172	376,013	792,164	55.60	14,248
1992	326,492.71	92,166	114,689	260,778	56.59	4,608
1993	1,011,504.13	270,183	336,207	827,023	57.58	14,363
1994	919,606.53	231,677	288,292	769,256	58.57	13,134
1995	1,048,499.67	248,233	308,893	896,882	59.56	15,058
1996	317,311.25	70,307	87,488	277,420	60.55	4,582
1997	1,249,681.78	257,922	320,950	1,116,184	61.54	18,138
1998	1,944,914.94	371,888	462,766	1,773,886	62.53	28,369
1999	1,615,402.72	284,100	353,525	1,504,188	63.53	23,677
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ACCOUNT 331 TRANSMISSION AND DISTRIBUTION MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
-	OR CURVE IOWA ALVAGE PERCENT					
2000	1,913,396.41	307,463	382,597	1,817,809	64.52	28,174
2001	3,322,266.91	482,925	600,937	3,219,670	65.52	49,140
2002	5,266,214.01	684,768	852,104	5,204,042	66.52	78,233
2003	2,978,783.84	342,115	425,718	2,999,883	67,51	44,436
2004	2,956,984.26	294,248	366,153	3,034,379	68.51	44,291
2005	1,530,235.27	128,815	160,293	1,599,478	69.51	23,011
2006	7,691,836.49	529,587	659 , 002	8,186,610	70.51	116,106
2007	1,635,880.30	87,799	109,255	1,772,007	71.50	24,783
2008	1,958,408.29	75,065	93,408	2,158,762	72.50	29,776
2009	583,292.63	13,416	16,695	654,092	73.50	8,899
2010	870,778.29	6,679	8,311	993,084	74.50	13,330
	65,666,383.93	16,677,004	20,752,080	54,764,262		921,731

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 59.4 1.40

ACCOUNT 333 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
1973	19,950.00	20,984	2,837	22,100	4.28	5,164
1976	2,500.00	2,528	342	2,783	5.16	539
1983	4,545.17	4,091	553	5,128	7.56	678
1984	115,666.00	101,958	13,784	130,798	7.96	16,432
1992	47,518.77	33,395	4,515	54,883	11.82	4,643
1998	1,035.00	539	73	1,221	15.76	77
1999	716,077.77	347,763	47,015	848,082	16.51	51,368
2000	2,227.16	1,000	135	2,649	17.30	153
2001	71,894.56	29,590	4,000	85,868	18.11	4,741
2002	148,000.72	55,090	7,448	177,553	18.96	9,365
2003	20,788.59	6,901	933	25,053	19.83	1,263
2004	1,449,958.88	421,557	56,992	1,755,457	20.72	84,723
2005	1,243,170.55	308,493	41,706	1,512,257	21.64	69,882
2006	1,190,291.26	243,563	32 , 928	1,454,936	22.58	64,435
2007	1,339,680.81	214,600	29,013	1,645,588	23.54	69,906
2008	503,425.45	57 , 800	7,814	621,468	24.52	25,345
2009	400,202.39	27 , 794	3 , 758	496,495	25.50	19,470
2010	30,984.86	717	97	38,634	26.50	1,458
	7,307,917.94	1,878,363	253,943	8,880,954		429,642

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 20.7 5.88

ACCOUNT 334 METERS AND METER INSTALLATIONS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
			(- /	(0)	(- 7	(· /
	OR CURVE IOWA					
NET SAI	LVAGE PERCENT	U				
1954	23.52	23	24			
1963	4,369.75	3,861	4,370			
1965	429.98	371	430			
1967	15.09	13	15			
1968	198.36	165	198			
1970	581.20	470	581			
1971	594.00	474	594			
1972	260.95	205	261			
1973	65,885.59	51,061	65,886			
1974	3,438.85	2,624	3,439			
1975	1,585.46	1,190	1,585			
1976	1,046.64	773	1,047			
1977	3,236.53	2,349	3,237			
1978	1,474.61	1,051	1,475			
1979	3,423.21	2,394	3,423			
1980	1,369.52	939	1,370			
1981	3,241.42	2,178	3,241			
1982	32,556.90	21,412	32 , 557			
1983	3,187.58	2,050	3,188			
1984	3,506.57	2,202	3,507			
1985	6,732.39	4,125	6,732			
1986	2,057.88	1,229	2,058			
1987	935.33	543	935			
1988	2,541.93	1,434	2,542			
1989	4,846.22	2,649	4,846			
1990	1,109.39	587	1,109			
1991	1,448.24	739	1,448			
1992	520.01	255	520			
1993	29 , 757.75	14,046	29,409	349	15.84	22
1994	3,523.73	1,592	3,333	191	16.45	12
1995	1,436.02	618	1,294	142	17.08	8
1996	2,699.99	1,104	2,311	389	17.73	22
1997	48,883.87	18,902	39 , 576	9,308	18.40	506
1998	59,578.29	21,647	45,323	14,255	19.10	746
1999	85,721.27	29,088	60,903	24,818	19.82	1,252
2000	1,508,201.60	474,073	992,589	515,613	20.57	25,066
2001	7,953,922.29	2,296,059	4,807,365	3,146,557	21.34	147,449
2002	179,447.60	47,015	98,438	81,010	22.14	3,659
2003	6,193.57	1,451	3,038	3,156	22.97	137
2004	467,573.92	96,166	201,347	266,227	23.83	11,172
2005	67,986.58	11,966	25,054	42,933	24.72	1,737
2006	512,895.60	74,714	156,432	356,464	25.63	13,908

ACCOUNT 334 METERS AND METER INSTALLATIONS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA					
NEI SE	ALVAGE PERCENT	U				
2007	2,537,482.71	290,110	607,417	1,930,066	26.57	72,641
2008	1,238,512.96	101,967	213,493	1,025,020	27.53	37,233
2009	420,930.75	20,908	43,776	377,155	28.51	13,229
2010	218,366.75	3,640	7,621	210,746	29.50	7,144
	15,493,732.37	3,612,432	7,489,337	8,004,395		335,943

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 23.8 2.17

ACCOUNT 335 FIRE HYDRANTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA VAGE PERCENT					
1968	4,317.81	2,603	3,670	1,080	31.64	34
1969	3,757.69	2,219	3,128	1,005	32.42	31
1970	401.00	232	327	114	33.20	3
1971	2,574.41	1,457	2,054	778	33.99	23
1972	4,621.80	2 , 557	3,605	1,479	34.79	43
1973	12,158.70	6,573	9,266	4,109	35.60	115
1974	2,392.81	1,263	1,781	851	36.42	23
1975	1,033.26	532	750	387	37.24	10
1976	30,416.24	15,261	21,514	11,944	38.07	314
1977	62,148.99	30,363	42,804	25,560	38 .9 1	657
1978	25,026.85	11,897	16,772	10,758	39.75	271
1979	22,047.50	10,186	14,360	9,892	40.60	244
1980	5,475.00	2,455	3,461	2,562	41.46	62
1981	825.88	359	506	402	42.32	9
1982	7,443.02	3,136	4,421	3,766	43.19	87
1983	20,432.44	8,326	11,738	10,738	44.07	244
1984	84,174.98	33,135	46,712	45,880	44.95	1,021
1985	26,479.94	10,053	14,172	14,956	45.84	326
1986	31,282.27	11,439	16,126	18,284	46.73	391
1987	5,475.57	1,925	2,714	3, 309	47.63	69
1988	72,630.20	24,493	34,529	45,364	48.54	935
1989	12,006.24	3,877	5,466	7,741	49.45	157
1990	11,525.71	3,557	5,014	7,664	50.36	152
1991	13,024.95	3,830	5,399	8,928	51.29	174
1992	7,388.70	2,066	2,913	5, 215	52.21	100
1993	5,282.06	1,399	1,972	3,838	53.14	72
1994	31,594.59	7,904	11,143	23,611	54.08	437
1995	40,714.23	9,584	13,511	31,275	55.02	568
1996	707.00	156	220	558	55.96	10
1997	107,544.02	22,122	31,186	87,112	56.91	1,531
1998	158,121.66	30,165	42,524	131,410	57.86	2,271
1999	8,212.31	1,444	2,036	6,998	58.81	119
2001	116,073.51	16,909	23,837	103,844	60.73	1,710
2002	175,793.80	22,928	32,322	161,051	61.70	2,610
2003	16,776.55	1,932	2,724	15,730	62.67	251
2004	13,310.17	1,330	1,875	12,766	63.64	201
2005	8,470.86	717	1,011	8,307	64.61	129
2006	52,843.57	3,662	5,162	52,966	65.59	808

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ACCOUNT 335 FIRE HYDRANTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
-	R CURVE IOWA JVAGE PERCENT					
2007 2009 2010	3,880.27 16,078.80 22,118.51	210 374 170	296 527 240	3,972 17,160 24,090	66.56 68.52 69.51	60 250 347
	1,246,583.87	314,800	443,788	927,454		16,869

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 55.0 1.35

ACCOUNT 339.1 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
2002 2003	1,109.47 1,559.80	464 578	1,109 1,560			
	2,669.27	1,042	2,669			

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

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ACCOUNT 339.2 OTHER PLANT AND MISCELLANEOUS EQUIP.-SOURCE OF SUPPLY & PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	R EM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA VAGE PERCENT					
2000	3,715.35	1,235	3,253	462	20.03	23
2001	572.40	173	456	116	20.93	6
2002	23,438.17	6,367	16,769	6,669	21.85	305
2003	23,036.52	5,544	14,602	8,435	22.78	370
2004	159,216.45	33,383	87 , 922	71,294	23.71	3,007
2005	19.74	4	11	9	24.66	
2008	12,233.04	999	2,631	9,602	27.55	349
	222,231.67	47,705	125,644	96,588		4,060

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 23.8 1.83

ACCOUNT 339.3 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA /AGE PERCENT					
1990	13,267.72	8,146	13,268			
2000	24,880.00	8,575	23,922	958	19.66	49
2001	3,974.74	1,244	3,470	505	20.61	25
2004	190,994.57	41,255	115,093	75, 902	23.52	3,227
2006	8,500.00	1,275	3,557	4,943	25.50	194
	241,617.03	60,495	159,310	82,307		3,495

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 23.5 1.45

ACCOUNT 339.4 OTHER PLANT & MISCELLANEOUS EQUIP.-TRANSMISSION & DISTRIBUTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA					
1985	11,619.82	7,410	11,620			
2001	4,799.21	1,252	3,536	1,263	25.87	49
2002	64,302.90	15,066	42,546	21,757	26.80	812
2003	36,170.84	7,503	21,189	14,982	27.74	540
2004	94,060.29	16,958	47,889	46,171	28.69	1,609
2005	26.40	4	11	15	29.65	1
2006	4,049.02	508	1,435	2,614	30.61	85
2008	1,704.80	119	336	1,369	32.55	42
	216,733.28	48,820	128,562	88,171		3,138

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 28.1 1.45

ACCOUNT 340 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE 10-SO LVAGE PERCENT	~				
1998	1,282.20	1,282	1,282			
2003	2,259.00	1,694	438	1,821	2.50	728
2004	1,402.08	911	235	1,167	3.50	333
2005	855, 729.15	470,651	121,661	734,068	4.50	163,126
2006	2,917,187.90	1,312,735	339,336	2,577,852	5.50	468,700
2007	343,563.24	120,247	31,083	312,480	6.50	48,074
2008	728,670.78	182,168	47,090	681,581	7.50	90,877
2009	1,090,686.63	163,603	42,291	1,048,396	8.50	123,341
2010	89,068.30	4,453	1,151	87,917	9.50	9,254
	6,029,849.28	2,257,744	584 , 567	5,445,282		904,433

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 6.0 15.00

ACCOUNT 341 TRANSPORTATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA VAGE PERCENT					
2002	194,277.22	98,557	1,770	182,793	4.66	39,226
2003	171,606.41	79,068	1,420	161,606	5.15	31,380
2004	282,462.45	116,728	2,096	266,243	5.65	47,123
2005	6,375.98	2,314	42	6,015	6.18	973
2006	533,867.45	165,339	2,969	504,205	6.74	74,808
2008	174,423.91	33,141	595	165,108	8.00	20,638
2009	47,788.28	5,811	104	45,295	8.72	5,194
2010	24,483.19	1,093	20	23,239	9.53	2,439
	1,435,284.89	502,051	9,016	1,354,505		221,781

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 6.1 15.45

AQUA TEXAS, INC.

ACCOUNT 343 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE 20-S AGE PERCENT	~				
2002	87,534.82	37,202	9,926	77,609	11.50	6,749
2003	7,068.18	2,651	707	6,361	12.50	509
2004	14,748.38	4,793	1,279	13,469	13.50	998
2005	14,344.80	3,945	1,053	13,292	14.50	917
2006	32,850.83	7,391	1,972	30,879	15.50	1,992
2007	4,258.91	745	198	4,061	16.50	246
2008	1,725.44	216	58	1,667	17.50	95
2010	3,900.00	98	26	3,874	19.50	199
	166,431.36	57,041	15,219	151,212		11,705

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.9 7.03

ACCOUNT 344 LABORATORY EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 15- ALVAGE PERCENT	~				
2006	1,362.70	409	140	1,223	10.50	116
	1,362.70	409	140	1,223		116
	COMPOSITE REMA	INING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	10.5	8.51

III-122 AT-GRAY 000694

ACCOUNT 345 POWER OPERATED EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA /AGE PERCENT					
2001	13,068.00	5,920	3,179	9,889	10.94	904
2003	36,456.08	13,325	7,156	29,300	12.69	2,309
2004	102,669.25	32,803	17,615	85 , 054	13.61	6,249
2009	49,220.00	3,692	1,983	47,237	18.50	2,553
	201,413.33	55,740	29,933	171,480		12,015

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 14.3 5.97

ACCOUNT 346 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE 15-S VAGE PERCENT	~				
2001	6,657.97	4,217	2,169	4,489	5.50	816
2002	64,655.60	36,638	18,845	45,811	6.50	7,048
2004	28,905.46	12,526	6,443	22,462	8.50	2,643
2005	32,199.94	11,807	6,073	26,127	9.50	2,750
2006	70,534.14	21,160	10,883	59,651	10.50	5,681
2007	13,093.69	3,055	1,571	11,523	11.50	1,002
2008	24,538.38	4,090	2,104	22,434	12.50	1,795
2009	11,312.66	1,131	582	10,731	13.50	795
	251,897.84	94,624	48,670	203,228		22,530

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.0 8.94

ACCOUNT 347 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE 15-S VAGE PERCENT					
2001	12,190.14	7,720	3,099	9,091	5.50	1,653
2002	9,312.51	5,277	2,119	7,194	6.50	1,107
2003	6,056.00	3,028	1,216	4,840	7.50	645
2004	6,784.65	2,940	1,180	5,605	8.50	659
2006	38,259.00	11,478	4,608	33,651	10.50	3,205
2007	7,001.40	1,634	656	6,345	11.50	552
2008	68,482.84	11,414	4,582	63,901	12.50	5,112
2009	119,039.42	11,904	4,779	114,260	13.50	8,464
	267,125.96	55,395	22,239	244,887		21,397

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.4 8.01

III-125 AT-GRAY 000697

ACCOUNT 348 OTHER TANGIBLE PLANT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2010

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE 20-S VAGE PERCENT					
1996	437,500.00	317,188	190,739	246,761	5.50	44,866
1998	226,508.20	141,568	85,131	141,377	7.50	18,850
1999	301,942.43	173,617	104,404	197,538	8.50	23,240
2000	5,954.87	3,126	1,880	4,075	9.50	429
2001	28,333.07	13,458	8,093	20,240	10.50	1,928
2002	41,457.57	17,619	10,595	30,863	11.50	2,684
2003	82,863.78	31,074	18,686	64,178	12.50	5,134
2004	334,033.48	108,561	65 , 282	268,751	13.50	19,907
2005	1,015.76	279	168	848	14.50	58
2006	35,037.96	7,884	4,741	30,297	15.50	1,955
2009	8,335.82	625	376	7,960	18.50	430
	1,502,982.94	814,999	490,095	1,012,888		119,481

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 8.5 7.95

III-126 AT-GRAY 000698

SOAH DOCKET NO. 582-14-1051 TCEQ DOCKET NO. 2013-2007-UCR

APPLICATION OF AQUA TEXAS,	§	BEFORE THE STATE OFFICE
INC. AND AQUA UTILITIES, INC.	§	
D/B/A AQUA TEXAS FOR WATER	§	
AND SEWER RATE/TARIFF	§	
CHANGES IN THE SOUTHEAST	§	
REGION IN CHAMBERS, LIBERTY,	§	OF
AND JEFFERSON COUNTIES, CCN	§	
NOS. 11157, 13203, 20453, AND 21065,	§	
APPLICATION NOS. 37696-R AND	§	
37697-R	Ş	ADMINISTRATIVE HEARINGS

AQUA TEXAS' PREFILED TESTIMONY AND EXHIBITS

TO THE HONORABLE JUDGES QUALTROUGH AND BENNETT:

COMES NOW Aqua Texas, Inc. and Aqua Utilities, Inc. d/b/a Aqua Texas ("Aqua Texas") and submits the following Prefiled Testimony and Exhibits as follows:

TESTIMONY

Α	Testimony of Robert L. Laughman			
В	Testimony of Kurt A. Scheibelhut		<i>⇔</i>	
C	Testimony of Stan F. Szczygiel	옯		2
D	Testimony of Stephen H. Blackhurst	5	35	228
E	Testimony of Bruce H, Fairchild	器	3	
F	Testimony of John J. Spanos	HEF CLERKS CAPICE	ţ:	
G	Testimony of William Henry Waggy	ेर्ल	S	F
H	Testimony of Paul M. Terrill			
I	Rate Case Expense Testimony of Robert L. Laughman			
J	Rate Case Expense Testimony of Stephen H. Blackhurst			
K	Rate Case Expense Testimony of Bruce H. Fairchild			
L	Rate Case Expense Testimony of John. J. Spanos			
M .	Rate Case Expense Testimony of William Henry "Hank" Wa	ggy		

No.	Description
AT-43	Chart - 2102 Avg Usage for 5/8" x 3/4" Customers
AT-44	Fairchild Rate of Return Study
AT-45	Gray Closing Documents
AT-46	Schedule of Aqua Texas' Rate Case Expenses
AT-47	Aqua Texas Rate Case Expense Invoices
AT-48	Robert L. Laughman Resume
AT-49	Stephen H. Blackhurst Resume
AT-50	Kurt A. Scheilbelhut Resume
AT-51	William "Hank' Waggy Resume
AT-52	John Spanos Resume
AT-53	Bruce Fairchild Resume
AT-54	Bruce Fairchild List of Testimony
AT-55	Bruce Fairchild Water and Sewer Experience
AT-56	Stan Szczygiel Resume
AT-57	Paul Terrill Resume
AT-58	Mark Zeppa Resume

Respectfully submitted,

THE TERRILL FIRM, P.C.

Paul M. Terrill III

State Bar No. 00785094

r t. Kirkban

Geoffrey P. Kirshbaum

State Bar No. 24029665

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Austin, Texas 78701

Tel: (512) 474-9100 Fax: (512) 474-9888

Mark H. Zeppa State Bar No. 22260100 Law Offices of Mark H. Zeppa, PC 4833 Spicewood Springs Rd #202 Austin, Texas 78759-8435

Tel: (512) 346-4011 Fax: (512) 346-6847

ATTORNEYS FOR AQUA TEXAS, INC. AND AQUA UTILITIES, INC. DBA AQUA TEXAS

CERTIFICATE OF SERVICE

I hereby certify that on April 10, 2014, a true and complete copy of the foregoing was sent to the following by e-service, facsimile, overnight delivery, or by first class mail:

Parties	Representative / Address	Phone
SOAH Docket Clerk	Docket Clerk State Office of Admin. Hearings 300 West 15th Street, Suite 502 Austin, TX 78701	Fax: (512) 322-2061
TCEQ Chief Clerk	Office of the Chief Clerk, 12100 Park 35 Circle Bldg. F/1, Room 1104 Austin, Texas 78753	Fax: (512) 239-3311
TCEQ Executive Director	Kayla Murray Jessica Rogers Executive Director, TCEQ MC-175, P.O. Box 13087 Austin, TX 78711-3087	Tel: (512) 239-4761 Fax: (512) 239-0606 kayla.murray@tceq.texas.gov jessica.rogers@tceq.texas.gov
Office of Public Interest Counsel of TCEQ	Eli Martinez TCEQ, OPIC MC-103, P.O. Box 13087 Austin, TX 78711-3087	Tel: (512) 239-6363 Fax: (512) 239-6377 eli.martinez@tceq.texas.gov
Office of Public Utility Counsel	Jim Rourke Ross Henderson Office of Public Utility Counsel PO Box 12397 Austin, TX 78711-2397	Tel: (512) 936-7510 Fax: (512) 936-7525 jim.rourke@opuc.texas.gov ross,henderson@opuc.texas.gov
Tracie B. Fisher	Tracie B. Fisher 15203 Victoria Ln Baytown, TX 77523	Tel: (713) 438-2732 tracie@traciesplace.us
Ben Connealy	Ben Connealy 8626 Briar oaks Ln Bayotwn, TX 77523	Tel: (832) 725-6600 benconnealy@yahoo.com
Crawdads, Inc.	David K. Moore 870 19 th St Beaumont, TX 77706	Tel: (409) 658-9291 Fax: (409) 745-1042 mycrawdad@aol.com

Geoffrey P. Kirshbaum

SOAH DOCKET NO. 582-14-1051 TCEQ DOCKET NO. 2013-2007-UCR

APPLICATION OF AQUA TEXAS,	§	BEFORE THE STATE OFFICE
INC. AND AQUA UTILITIES, INC.	§	
D/B/A AQUA TEXAS FOR WATER	§	
AND SEWER RATE/TARIFF	§	
CHANGES IN THE SOUTHEAST	§	
REGION IN CHAMBERS,	§	OF
LIBERTY, AND JEFFERSON	§	
COUNTIES, CCN NOS. 11157,	§	
13203, 20453, AND 21065,	§	
APPLICATION NOS. 37696-R AND	§	ADMINISTRATIVE HEARINGS
37697-R	J	

DIRECT TESTIMONY AND EXHIBITS

OF

JOHN J. SPANOS

ON BEHALF OF

AQUA TEXAS, INC. AND AQUA UTILITIES, INC. DBA AQUA TEXAS

April 10, 2014

DIRECT TESTIMONY AND EXHIBITS OF

JOHN J. SPANOS

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AT-4	Aqua Texas' Wastewater Plant Depreciation Study
AT-2	TCEQ RG-354 - System of Accounts
AT-5	John J. Spanos' Resume and List of Previous Testimony

1		DIRECT TESTIMONY OF JOHN J. SPANOS
2		ON BEHALF OF
3		AQUA TEXAS, INC. AND AQUA UTILITIES, INC. DBA AQUA TEXAS
4		
5		I. BACKGROUND AND QUALIFICATIONS
6	Q.	Please state your name and address.
7	A.	My name is John J. Spanos. My business address is 207 Senate Avenue, Camp Hill,
8		Pennsylvania 17011.
9		
0	Q.	Are you associated with any firm?
1	A.	Yes. I am associated with the firm of Gannett Fleming, Inc.
2		
13	Q.	How long have you been associated with Gannett Fleming, Inc.?
4	A.	I have been associated with the firm since I graduated from college in June 1986.
15		
6	Q.	What is your position with the firm?
17	A.	I am a Senior Vice President of the Valuation and Rate Division.
8		
9	Q.	What is your education background?
20	A.	I have Bachelor of Science degrees in Industrial Management and Mathematics from
21		Carnegie Mellon University and a Master of Business Administration from York

I am also a member of the American Gas Association/Edison Electric Institute Industry Accounting Committee. Q. Do you hold any special certification as a depreciation expert? A. Yes. The Society of Depreciation Professionals has established national standards of depreciation professionals. The Society administers an examination to become certified in this field. I passed the certification exam in September 1997 and was recertified in August 2003, February 2008 and January 2013. Q. Please outline your experience in the field of depreciation. In June 1986, I was employed by Gannett Fleming Valuation and Rate Consultantical services and the second services of the second services and the second services are serviced in the field of depreciation.			
 Q. Do you belong to any professional societies? A. Yes. I am a member and past President of the Society of Depreciation Professiona I am also a member of the American Gas Association/Edison Electric Institute Industry Accounting Committee. Q. Do you hold any special certification as a depreciation expert? Yes. The Society of Depreciation Professionals has established national standards of depreciation professionals. The Society administers an examination to become certified in this field. I passed the certification exam in September 1997 and was not certified in August 2003, February 2008 and January 2013. Q. Please outline your experience in the field of depreciation. In June 1986, I was employed by Gannett Fleming Valuation and Rate Consultant 	1		College of Pennsylvania.
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certified in this field. I passed the certification exam in September 1997 and was a certified in August 2003, February 2008 and January 2013. Q. Please outline your experience in the field of depreciation. In June 1986, I was employed by Gannett Fleming Valuation and Rate Consultant	9	A.	Yes. The Society of Depreciation Professionals has established national standards for
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13 14 Q. Please outline your experience in the field of depreciation. 15 A. In June 1986, I was employed by Gannett Fleming Valuation and Rate Consultan	11		certified in this field. I passed the certification exam in September 1997 and was re-
 Q. Please outline your experience in the field of depreciation. A. In June 1986, I was employed by Gannett Fleming Valuation and Rate Consultan 	12		certified in August 2003, February 2008 and January 2013.
15 A. In June 1986, I was employed by Gannett Fleming Valuation and Rate Consultan	13		
	14	Q.	Please outline your experience in the field of depreciation.
Inc. as a Depreciation Analyst. During the period June 1986 through December 199	15	A.	In June 1986, I was employed by Gannett Fleming Valuation and Rate Consultants,
	16		Inc. as a Depreciation Analyst. During the period June 1986 through December 1995,

A. In June 1986, I was employed by Gannett Fleming Valuation and Rate Consultants, Inc. as a Depreciation Analyst. During the period June 1986 through December 1995, I assisted in the preparation of numerous depreciation and original cost studies for utility companies in various industries.

In each study, I assembled and analyzed historical and simulated data, performed field reviews, developed preliminary estimates of service life and net salvage, calculated annual depreciation, and prepared reports for submission to state

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public utility commissions or Federal regulatory agencies.

In January 1996, I was assigned to the position of Supervisor of Depreciation Studies. In July 1999, I was promoted to the position of Manager, Depreciation and Valuation Studies. In December 2000, I was promoted to the position of Vice President. In April 2012, I attained my current position of Senior Vice President. I am responsible for conducting depreciation, valuation and original cost studies, including the preparation of final exhibits and responses to data requests for submission to the appropriate regulatory bodies.

Since January 1996, I have conducted depreciation studies similar to those previously listed including assignments for Pennsylvania-American Water Company; Aqua Pennsylvania; Kentucky-American Water Company; Virginia-American Water Company; Indiana-American Water Company; Hampton Water Works Company; Omaha Public Power District; Enbridge Pipe Line Company; Inc.; Columbia Gas of Virginia, Inc.; Virginia Natural Gas Company National Fuel Gas Distribution Corporation - New York and Pennsylvania Divisions; The City of Bethlehem - Bureau of Water; The City of Coatesville Authority; The City of Lancaster - Bureau of Water; Peoples Energy Corporation; The York Water Company; Public Service Company of Colorado; Enbridge Pipelines; Enbridge Gas Distribution, Inc.; Reliant Energy-HLP; Massachusetts-American Water Company; St. Louis County Water Company; Missouri-American Water Company; Chugach Electric Association; Alliant Energy; Oklahoma Gas & Electric Company; Nevada Power Company;

Dominion Virginia Power; NUI-Virginia Gas Companies; Pacific Gas & Electric
Company; PSI Energy; NUI - Elizabethtown Gas Company; Cinergy Corporation -
CG&E Cinergy Corporation - ULH&P Columbia Gas of Kentucky; South Carolina
Electric & Gas Company; Idaho Power Company; El Paso Electric Company; Central
Hudson Gas & Electric; Centennial Pipeline Company; CenterPoint Energy-Arkansas;
CenterPoint Energy - Oklahoma; CenterPoint Energy - Entex; CenterPoint Energy -
Louisiana; NSTAR - Boston Edison Company; Westar Energy, Inc.; United Water
Pennsylvania; PPL Electric Utilities; PPL Gas Utilities; Wisconsin Power & Light
Company; TransAlaska Pipeline; Avista Corporation; Northwest Natural Gas;
Allegheny Energy Supply, Inc.; Public Service Company of North Carolina; South
Jersey Gas Company; Duquesne Light Company; MidAmerican Energy Company;
Laclede Gas; Duke Energy Company; E.ON U.S. Services Inc.; Elkton Gas Services;
Anchorage Water and Wastewater Utility; Kansas City Power and Light; Duke
Energy North Carolina; Duke Energy South Carolina; Duke Energy Ohio Gas; Duke
Energy Kentucky; Duke Energy Indiana; Northern Indiana Public Service Company;
Tennessee-American Water Company; Columbia Gas of Maryland; Bonneville Power
Administration; NSTAR Electric and Gas Company; EPCOR Distribution, Inc.; B.
C. Gas Utility, Ltd; Entergy Arkansas; Entergy Texas; Entergy Mississippi; Entergy
Louisiana; Entergy Gulf States Louisiana; the Borough of Hanover; Madison Gas and
Electric; Central Maine Power; PEPCO; PacifiCorp; Minnesota Energy Resource
Group; Jersey Central Power & Light Company; Cheyenne Light, Fuel and Power

Company; Central Vermont Public Service Corporation; Green Mountain Power;
Portland General Electric Company; Atlantic City Electric; Nicor Gas Company;
Black Hills Power; Black Hills Colorado Gas; Public Service Company of Oklahoma;
Peoples Gas Light and Coke Company; North Shore Gas Company; and Greater
Missouri Operations. My additional duties include determining final life and salvage
estimates, conducting field reviews, presenting recommended depreciation rates to
management for its consideration and supporting such rates before regulatory bodies.

- Q. Have you submitted testimony to any regulatory entities on the subject of utility plant depreciation?
- A. Yes. I have submitted testimony in over 170 cases before over 30 regulatory bodies.

 A list of the cases are set forth in AT-52.

- Q. Have you received any additional education relating to utility plant depreciation?
- A. Yes. I have completed the following courses conducted by Depreciation Programs,
 Inc.: "Techniques of Life Analysis," "Techniques of Salvage and Depreciation
 Analysis," "Forecasting Life and Salvage," "Modeling and Life Analysis Using
 Simulation" and "Managing a Depreciation Study."

Q. Is there anything further you would like to add about your educational and professional experience?

A. Yes. Additional information as to my educational and professional qualifications, as well as a list of cases in which I testified, is contained in AT-52.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony in this proceeding?

A. My testimony will support and explain the depreciation studies conducted under my direction and supervision for the water and wastewater utility assets in Aqua Texas' Southeast Region and other Texas regions. The study represents all depreciable Aqua Texas water and wastewater plant assets as of December 31, 2010 except for the Southeast Region-Gray assets. My testimony will explain how the depreciation rates in the studies are appropriate for depreciating the Southeast Region-Gray water and wastewater plant assets also.

Q. Have you attached documents to your testimony?

Yes, they are attached as AT-3, AT-4, AT-25, and AT-52. AT-3 is a report entitled, "Depreciation Study - Calculated Annual Depreciation Accruals Related to Utility Plant as of December 31, 2010." This report sets forth the results of my water plant depreciation study for Aqua Texas. AT-4 is a report entitled, "Depreciation Study - Calculated Annual Depreciation Accruals Related to Wastewater Plant as of December 31, 2010." This report sets forth the results of my wastewater plant depreciation study for Aqua Texas. AT-25 is a copy of the TCEQ's Regulatory

1		Guidance Document RG-354 which covers System of Accounts for Water and
2		Wastewater Utilities with 200 or More Connections. AT-52 is a copy of my resume.
3		
4	Q.	Is AT-3 a true and accurate copy of your water plant depreciation study?
5	A.	Yes.
6		
7	Q.	Does AT-3 accurately portray the results of your water plant depreciation study
8		as of December 31, 2010?
9	A.	Yes.
0		
1	Q.	Is AT-4 a true and accurate copy of your wastewater plant depreciation study?
12	A.	Yes.
13		
4	Q.	Does AT-4 accurately portray the results of your wastewater plant depreciation
15		study as of December 31, 2010?
16	A.	Yes.
17		
8	Q.	Were AT-3 and AT-4 prepared under your direction and control?
9	A.	Yes.
20		
21	Q.	Are AT-3 and AT-4 true and correct copies of the studies prepared for and

- 2 **A.** Yes.
- 3
- Q. Are the recommended depreciation accrual rates presented in your water and wastewater plant depreciation studies reasonable and applicable to the Aqua

 Texas water and wastewater plant in service as of December 31, 2010 examined in your study?
- Yes, they are. Our life and salvage analyses considered several years of data and are appropriate for up to five years beyond the actual date of our depreciation studies.
- 10

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- Q. Are the recommended depreciation accrual rates presented in your water and wastewater plant depreciation studies reasonable and applicable to use for the Aqua Texas Southeast Region-Gray water and wastewater plant assets?
- A. Yes. The proposed depreciation accrual schedules are appropriate and reasonable for determining the annual depreciation expense for Southeast Region Gray plant balances.

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- Q. Please explain why?
- While continued surveillance and periodic revisions are required to maintain continued use of appropriate annual depreciation and accrued rates, generally the applicability of such rates to future balances is reasonable for a period of up to five

years after the results are approved for a specific date.

III. DEPRECIATION STUDIES

- Q. Please explain the concept of depreciation.
 - A. Depreciation refers to the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of utility plant in the course of service from causes that can be reasonably anticipated or contemplated, against which Aqua Texas is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, obsolescence, changes in the art, changes in demand and the requirements of public authorities.

- Q. Can you please provide a general overview of how depreciation expense is calculated?
- **A.** Generally, an annual depreciation rate is applied to an original cost less net salvage value for an asset when placed in service to determine annual depreciation expense for that asset.

- Q. What is the purpose of your depreciation studies?
- **A.** The purpose of my depreciation studies was to estimate the annual depreciation accrual rates related to water and wastewater plant in service for ratemaking and

record-keeping purposes and determine appropriate average service lives and net salvage percentages for each plant account.

Q. What is contained in your studies?

A. My studies are presented in three parts. Part I, Introduction, presents the scope and basis for the depreciation study. Part II, Methods Used in the Estimation of Depreciation, includes descriptions of the basis of the study, the estimation of survivor curves and net salvage and the calculation of annual and accrued depreciation. Part III, Results of Study, presents a description of the results, a summary of the depreciation calculations, charts and graphs depicting service life characteristics, tables presenting the net salvage analyses, and detailed account by account depreciation calculations.

The table on pages III-4 and III-5 in each report presents the estimated survivor curve, the net salvage percent, the original cost for the assets I examined as of December 31, 2010, the book reserve, the calculated annual depreciation accrual, depreciation rate and composite remaining life for each account or sub-account for Aqua Texas.

Q. Please explain how you performed your depreciation study?

A. I used the straight line remaining life method of depreciation, with the average service life procedure. The annual depreciation is based on a method of depreciation

accounting that seeks to distribute the unrecovered cost of fixed capital assets over the estimated remaining useful life of each unit, or group of assets, in a systematic and rational manner.

In the water utility depreciation study, for General Plant Accounts 340, 343, 344, 346, 347 and 348, I used the straight line remaining life method of amortization. I also used the straight line remaining life method of amortization for Accounts 390, 393, 394, 396, 397 and 398, noted in the wastewater depreciation study. The annual amortization is based on amortization accounting that distributes the unrecovered cost of fixed capital assets over the remaining amortization period selected for each account and vintage (year of installation).

Q. What is the straight line remaining life method of depreciation?

A. The straight line remaining life method of depreciation allocates the original cost of the property, less accumulated depreciation, less future net salvage, in equal amounts to each year of remaining service life.

Q. What is amortization accounting?

A. Amortization accounting is used for accounts with a large number of units, but small asset values. In amortization accounting, units of property are capitalized in the same manner as they are in depreciation accounting. However, depreciation accounting is difficult for these assets because periodic inventories are required to properly reflect

plant in service. Consequently, retirements are recorded when a vintage is fully amortized rather than as the units are removed from service. That is, there is no dispersion of retirement. All units are retired when the age of the vintage reaches the amortization period. Each plant account or group of assets is assigned a fixed period which represents an anticipated life during which the asset will render service. For example, in amortization accounting, assets that have a 15 year amortization period will be fully recovered after 15 years of service and taken off Aqua Texas' books, but not necessarily removed from service. In contrast, assets that are taken out of service before 15 years remain on the books until the amortization period for that vintage has expired.

Q. For which plant accounts is amortization accounting being implemented?

A. Amortization accounting is only appropriate for certain General Plant accounts. In the water utility depreciation study, these accounts are 340, 343, 344, 346, 347 and 348 which represent approximately four percent of depreciable plant. In the wastewater utility depreciation study, these accounts are 390, 393, 394, 396, 397 and 398, which represent approximately 3 percent of depreciable plant.

Q. How did you determine the recommended annual depreciation accrual rates?

A. I did this in two phases. In the first phase, I estimated the service life and net salvage characteristics for each depreciable group, that is, each plant account or subaccount

identified as having similar characteristics.	In the second phase, I calculated the
composite remaining lives and annual deprec	iation accrual rates based on the service
life and net salvage estimates determined in	the first phase.

- Q. Please describe the first phase of the depreciation studies, in which you estimated the service life and net salvage characteristics for each depreciable group.
- A. The service life and net salvage study consisted of compiling historic data from records related to Aqua Texas' water and wastewater plants; analyzing these data to obtain historic trends of survivor and net salvage characteristics; obtaining supplementary information from Aqua Texas' management and operating personnel concerning practices and plans as they relate to plant operations; and interpreting the above data and the estimates used by other utilities to form judgments of average service life and net salvage characteristics.

- Q. What historical data did you analyze for the purpose of estimating service life characteristics?
- A. For both studies, I analyzed Aqua Texas' accounting entries that record plant transactions during the period 1998 through 2010. The transactions included additions, retirements, transfers and the related balances. Aqua Texas' records also included the surviving dollar value by year installed for each plant account as of December 31, 2010.

- Q. What method did you use to analyze this data?
- A. I used the retirement rate method. This is the most appropriate method when aged retirement data are available, because this method determines the average rates of retirement actually experienced by Aqua Texas during the period of time covered by the study.

- Q. Please describe how you used the retirement rate method to analyze Aqua Texas' service life data.
 - A. I applied the retirement rate method to each different property group in the study. For each property group, I used the retirement rate method to form a life table which, when plotted, shows an original survivor curve for that property group. Each original survivor curve represents the average survivor pattern experienced by the several vintage groups during the experience band studied. The survivor patterns do not necessarily describe the life characteristics of the property group; therefore, interpretation of the original survivor curves is required in order to use them as valid considerations in estimating service life. The Iowa type survivor curves were used to perform these interpretations.

- Q. What is an "Iowa Type Survivor Curve" and how did you use such curves to estimate the service life characteristics for each property group?
- A. Iowa-type curves are a widely used group of generalized survivor curves that contain

the range of survivor characteristics usually experienced by utilities and other industrial companies. The Iowa curves were developed at the Iowa State College Engineering Experiment Station through an extensive process of observing and classifying the ages at which various types of property used by utilities and other industrial companies had been retired.

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

The estimated survivor curve designations for each depreciable property group indicate the average service life, the family within the Iowa system to which the property group belongs, and the relative height of the mode. For example, the Iowa 50 R3 indicates an average service life of fifty years; a right moded, or R, type curve (the mode occurs after average life for right moded curves); and a medium height, 3, for the mode (possible modes for R type curves range from 1 to 5). I discuss Iowa-type curves in more detail in my depreciation studies, **AT-3** and **AT-4**, starting on page II-3 in each report. Further, examples of each type of curve are included in my studies as Figures 2-5.

Q. Are the factors considered in your estimates of service life and net salvage percentages presented in AT-3 and AT-4?

A. Yes. A discussion of the factors considered in the estimation of service lives and net salvage percentages are presented on pages II 2 through II 25 of AT-3, and on pages II-2 through II-24 of AT-4.

Q. Would you please explain the concept of "Net Salvage?"

A. Net salvage is a component of the service value of capital assets that is recovered through depreciation rates. The service value of an asset is its original cost less its net salvage. Net salvage is the salvage value received for the asset upon retirement less the cost to retire the asset. When the cost to retire exceeds the salvage value, the result is negative net salvage.

Inasmuch as depreciation expense is the loss in service value of an asset during a defined period, e.g. one year, it must include a ratable portion of both the original cost and the net salvage. That is, the net salvage related to an asset should be incorporated in the cost of service during the same period as its original cost so that customers receiving service from the asset pay rates that include a portion of both elements of the asset's service value, the original cost and the net salvage value.

For example, the full recovery of the service value of a \$1,000 fire hydrant will include not only the \$1,000 of original cost, but also, on average, \$150 to remove the hydrant at the end of its life and \$50 in salvage value. In this example, the net salvage component is negative \$100 (\$50 \$150), and the net salvage percent is negative 10% ((\$50 \$150)/\$1,000).

1	Q.	How did	you estimate	net salvage	percentages?
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A. I estimated the net salvage percentages by reviewing Aqua Texas' account specific historical salvage and cost of removal data for the period 2005 through 2010 as a percentage of the associated retired plant as well as considering industry experience in terms of net salvage estimates for other water companies.

- Q. Please describe the second phase of the process that you used in the depreciation studies in which you calculated composite remaining lives and annual depreciation accrual rates.
- A. After I estimated the service life and net salvage characteristics for each depreciable property group, I calculated the annual depreciation accrual rates for each group based on the straight line remaining life method, using remaining lives weighted consistent with the average service life procedure. The calculation of annual depreciation accrual rates were developed as of December 31, 2010.

- Q. Would you please use an example to illustrate the development of the annual depreciation accrual rate for a particular property group in your depreciation studies?
- **A.** I will use Account 320, Water Treatment Equipment, as an example because it represents an easily understood asset.
 - The retirement rate method was used to analyze the survivor characteristics of

this property group. Aged plant accounting data were compiled from 1998 through
2010 and analyzed in periods that best represent the overall service life of this
property. The life table for the 1998 - 2010 experience band is presented on pages III-
41 and III-42 of AT-3. The 1998 - 2010 life table displays the retirement and
surviving ratios of the aged plant data exposed to retirement by age interval. For
example, page III-41 of AT-3, shows \$1,849 retired during age interval 0.5 - 1.5 with
\$4,006,383 exposed to retirement at the beginning of the interval. Consequently, the
retirement ratio is 0.0005 (\$1,849/\$4,006,383) and the surviving ratio is 0.9995 (1
.0005). The life table, or original survivor curve, is plotted along with the estimated
smooth survivor curve, the 45-R2.5 on page III-40 of AT-3 .

My calculation of the annual depreciation related to original cost of water utility plant as of December 31, 2010, is presented on pages III-104 and III-105 of **AT-3**. The calculation is based on the 45-R2.5 survivor curve, 10% negative net salvage, the attained age, and the allocated book reserve. The tabulation sets forth the installation year, the original cost, calculated accrued depreciation, allocated book reserve, future accruals, remaining life and annual accrual. These totals are brought forward to the table on page III-4 of **AT-3**.

- Q. Did you physically observe Aqua Texas' plant and equipment as part of your depreciation study?
- A. Yes. I made a field review of Aqua Texas' property on August 2 and 3, 2011 to

observe representative portions of plant. Field reviews were conducted to become familiar with Aqua Texas operations and obtain an understanding of the function of the plant and information with respect to the reasons for past retirements and the expected future causes of retirements. This knowledge was incorporated in the interpretation and extrapolation of the statistical analyses.

Q. Will you please discuss Part III of your depreciation studies?

A. Yes, Part III of the depreciation studies sets forth the statistical results. Pages III-4 and III-5 summarize the depreciation results by account with proposed annual depreciation amounts and rates. The next sections of Part III represent the statistical analyses with graphical depiction of life and salvage analyses. The final section in Part III represents the detailed depreciation calculations by account. The calculations set forth each surviving plant balance by vintage and the calculated accumulated depreciation, remaining life and annual expense.

Q. Have the results of your depreciation studies been presented?

A. Yes, they have. The recommended depreciation accrual rates for each account are set forth on pages III-4 and III-5 of both AT-3 and AT-4. These summaries are also included in the application, AT-1, at Attachment 2, pages 5-8.

IV. TCEO FACTORS

1 Q .	Do you	know if TCEQ	has criteria tha	t depreciation	studies must	meet?
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Yes. In 2010 TCEQ issued new criteria that depreciation studies for water and wastewater utility assets must meet. The criteria are found in 30 Texas Administrative Code § 291.31.

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- 6 Q. Have you reviewed that set of criteria?
- 7 **A.** Yes.

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- 9 Q. Do your reports, AT-3 and AT-4, qualify as engineering or economic based depreciation studies?
- 11 A. Yes. My reports qualify as engineering-based depreciation studies.

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- Q. Can you discuss what 30 Texas Administrative Code § 291.31 requires in terms of depreciation studies and explain why your reports meet the TCEQ's depreciation study criteria in that rule?
 - A. Yes. Generally, the rule requires that for those utilities that elect a group accounting approach, all mortality characteristics, both life and net salvage, must be supported by an engineering or economic based depreciation study for which the test year for the deprecation is no more than five years old in comparison to the rate case test year. Aqua Texas uses group depreciation where all units utilize the same mortality characteristics. Accruals for the group are based on composite or weighted average

values of net salvage and average service life. All life and net salvage parameters are presented in the depreciation study.

The rule states that the engineering or economic based depreciation study must include information that meets several criteria, each of which I will discuss in turn here. First, the study must include investment by homogeneous category. The study summarizes the total plant balance contained in the general ledger by the utility plant accounts prescribed by the National Association of Regulatory Commissioners ("NARUC") system of accounts, which is recognized in the TCEQ publication RG-354, System of Accounts. A copy of this publication is attached as AT-25. Second and third, the study must include the expected level of gross salvage by category, and the expected cost of removal by category. Currently, Aqua Texas has eight years of history utilized in the net salvage study. Fourth, the study must include the accumulated provision for depreciation as appropriately reflected on the company's books by category. The accumulated provision for depreciation is calculated for each NARUC utility plant account category. Fifth, the study must include the average service life by category. The service life for all the plant recorded in the general ledger is summarized and the average service life is calculated for each NARUC utility plant account category. Sixth, the study must include the remaining life by category. The remaining life for all the plant recorded in the general ledger is summarized and the remaining life is calculated for each NARUC utility plant account category. Seventh, the study must include the Iowa Dispersion Pattern by

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category. The mortality curve table contained in our utility plant system utilizes the
Iowa Generalized Curves for each NARUC utility plant account category. The study
must also include a detailed narrative identifying the specific factors, data, criteria and
assumptions that were employed to arrive at the specific mortality proposal for each
homogeneous group of property. A depreciation narrative is prepared that
summarizes the steps taken to prepare the study and it includes a description of the
information contained in the final report that has the annual provision calculation for
each NARUC utility plant account category. Finally, the rules provide that
accelerated depreciation is not allowed. Aqua Texas does not accelerate any of its
depreciation. For the reasons discussed here, the depreciation studies meet the
requirements listed in Section 291.31.

V. DEPRECIATION RATES FOR AQUA TEXAS GRAY SYSTEMS ASSETS

- Q. Did you evaluate the Southeast Region-Gray water and wastewater assets as part of your depreciation studies?
- **A.** No.

- Q. Are the depreciation rates calculated in your depreciation studies appropriate for use with the Southeast Region-Gray water and wastewater assets?
- **A.** Yes.

- Q. Why are the depreciation rates calculated in your depreciation studies appropriate for use with the Southeast Region-Gray water and wastewater assets even though they were not part of the asset group reviewed for your studies?
- A. For up to five years, the depreciation accrual rates I developed for Aqua Texas may be used for additional and replacement assets that are the same or similar to those I evaluated in developing my depreciation studies. Therefore, additional assets that fall within the same NARUC account categories I evaluated, such as the Southeast Region-Gray system assets, may be properly depreciated using the same accrual rates I developed within the five-year time frame.

VI. CONCLUSION

- Q. In your opinion, are the depreciation and amortization rates set forth in AT-3 and AT-4 the appropriate rates for the Commission to adopt in this proceeding for Aqua Texas' Southeast Region-Gray water and wastewater assets?
- A. Yes. These rates appropriately reflect the rates at which the value of Aqua Texas' Southeast Region-Gray assets are being consumed over their useful lives. These rates are an appropriate basis for setting water and wastewater rates in this matter and for Aqua Texas to use for financial purposes and in booking depreciation and amortization expense going forward.

Q. Does this conclude your prefiled testimony?

- 1 A. Yes, but I reserve the right to supplement this testimony as additional information
- becomes available.

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AQUA TEXAS, INC.

Austin, Texas

DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AS OF DECEMBER 31, 2010

GANNETT FLEMING, INC. - VALUATION AND RATE DIVISION

Harrisburg, Pennsylvania



AT-GRAY100802



Excellence Delivered As Promised

January 3, 2012

Aqua Texas, Inc. 1106 Clayton Lane, Suite 400W Austin, TX 78723

Attention Stan F. Szczygiel

Manager of Rates and Planning

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the water plant of Aqua Texas, Inc. as of December 31, 2010. The attached report presents a description of the methods used in the estimation of depreciation, the summary of annual and accrued depreciation, the statistical support for the life and net salvage estimates and the detailed tabulations of annual and accrued depreciation.

Respectfully submitted,

GANNETT FLEMING, INC.

JOHN J. SPANOS

Vice President

Valuation and Rate Division

JJS:krm

054668

Gannett Fleming, Inc.
Valuation and Rate Division

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PART I. INTRODUCTION

I-1

AQUA TEXAS, INC.

DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AS OF DECEMBER 31, 2010

PART I. INTRODUCTION

SCOPE

This report presents the results of the depreciation study prepared for Aqua Texas, Inc. as applied to water plant in service as of December 31, 2010. It relates to the concepts, methods, and basic judgments which underlie recommended annual depreciation accrual rates related to current utility plant in service.

The service life and net salvage estimates resulting from the study were based on informed judgment which incorporated analyses of historical plant retirement data as recorded through 2010; a review of Company practice and outlook as they relate to plant operation and retirement; and consideration of current practice in the water industry, including knowledge of service life and salvage estimates used for other water properties.

PLAN OF REPORT

Part I, Introduction, includes brief statements of the scope and basis of the study. Part II presents descriptions of the methods used in the service life and salvage studies and the methods and procedures used in the calculation of depreciation. Part III presents the results of the study, including summary tables, survivor curve charts and life tables resulting from the retirement rate method of analysis, tabular results of the historical net salvage analyses, and detailed tabulations of the calculated remaining lives and annual accruals.

BASIS OF STUDY

Depreciation

For most accounts, the annual depreciation was calculated by the straight line method, using the average service life procedure and the remaining life basis. For certain General Plant accounts, the annual depreciation was based on amortization accounting. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group.

Survivor Curve Estimates

The procedure for estimating survivor curves, which define service lives and remaining lives, consisted of compiling historical service life data for the plant accounts or other depreciable groups, analyzing the historical data base through the use of accepted techniques, and forecasting the survivor characteristics for each depreciable account or group. These forecasts were based on interpretations of the historical data analyses and the probable future. The combination of the historical data and the estimated future trend yields a complete pattern of life characteristics, i.e., a survivor curve, from which the average service life and remaining service life are derived.

The historical data analyzed for life estimation purposes were compiled through 2010 from the Company's plant accounting records. Such data included plant additions, retirements, transfers and other activity recorded by the Company for each of its plant accounts and subaccounts.

The estimates of net salvage incorporated a review of experienced costs of removal and salvage related to plant retirements, and considerations of trends exhibited by the historical data. Each component of net salvage, i.e., cost of removal and salvage was

stated in dollars and as a percent of retirement for purposes of estimating average future levels of the components, as well as of net salvage.

An understanding of the function of the plant and information with respect to the reasons for past retirements and the expected causes of future retirements was obtained through field trips and discussions with operating and management personnel. The supplemental information obtained in this manner was considered in the interpretation and extrapolation of the statistical analyses.

Calculation of Depreciation

The depreciation accrual rates were calculated using the straight line method, the remaining life basis, and the average service life depreciation procedure. The change to amortization accounting for certain accounts is recommended because of the disproportionate plant accounting effort required when compared to the minimal original cost of the large number of items in these accounts. An explanation of the calculation of annual and accrued amortization is presented on page II-28 of the report.

11-1

PART II. METHODS USED IN
THE ESTIMATION OF DEPRECIATION

PART II. METHODS USED IN THE ESTIMATION OF DEPRECIATION

DEPRECIATION

Depreciation, in public utility regulation, is the loss in service value not restored by current repairs or covered by insurance.

Depreciation as used in accounting is a method of distributing fixed capital costs, less net salvage, over a period of time by allocating annual amounts to expense. Each annual amount of such depreciation expense is part of that year's total cost of providing utility service. Normally, the period of time over which the fixed capital cost is allocated to the cost of service is equal to the period of time over which an item renders service, that is, the item's service life. The most prevalent method of allocation is to distribute an equal amount of cost to each year of service life. This method is known as the straight line method of depreciation.

The calculation of annual depreciation based on the straight line method requires the estimation of average life and salvage. These subjects are discussed in the sections which follow.

SERVICE LIFE AND NET SALVAGE ESTIMATION

Average Service Life

The use of an average service life for a property group implies that the various units in the group have different lives. Thus, the average life may be obtained by determining the separate lives of each of the units, or by constructing a survivor curve by plotting the number of units which survive at successive ages. A discussion of the general concept of survivor curves is presented. Also, the lowa type survivor curves are reviewed.

Survivor Curves

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

lowa Type Curves. The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized survivor curves known as the lowa type curves. There are four families in the lowa system, labeled in accordance with the location of the modes of the retirements in relationship to the average life and the relative height of the modes. The left moded curves, presented in Figure 2, are those in which the greatest frequency of retirement occurs to the left of, or prior to, average service life. The symmetrical moded curves, presented in Figure 3, are those in which the greatest frequency of retirement occurs at average service life. The right moded curves,

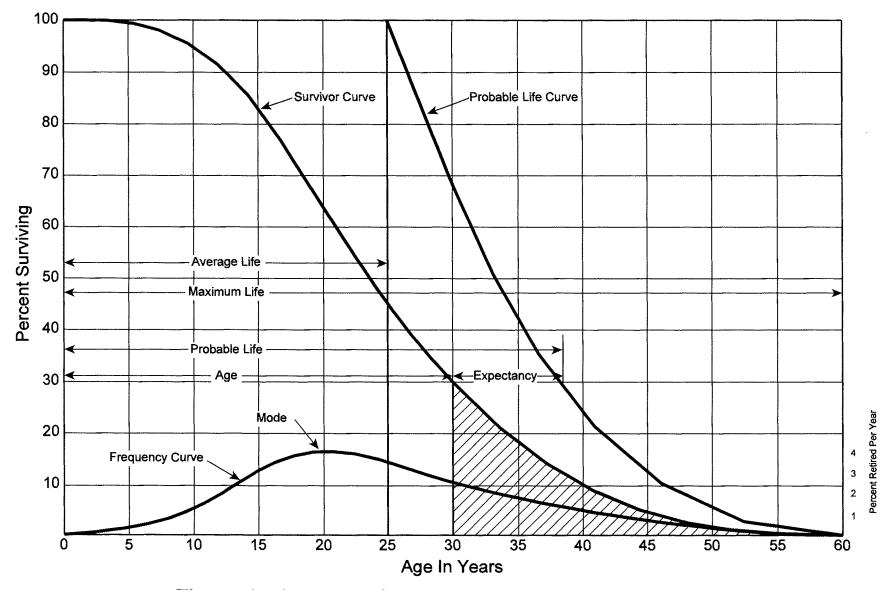


Figure 1. A Typical Survivor Curve and Derived Curves

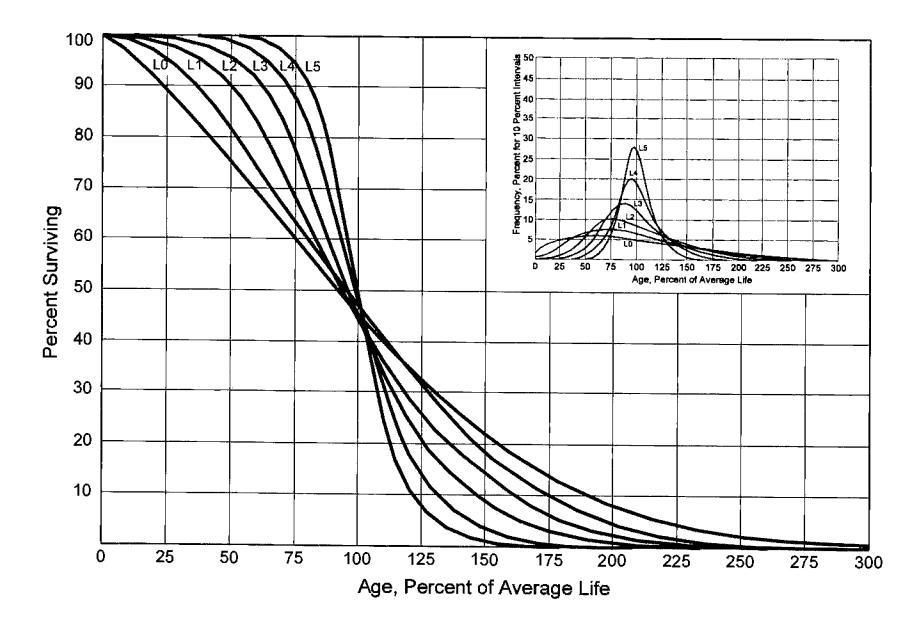


Figure 2. Left Modal or "L" Iowa Type Survivor Curves

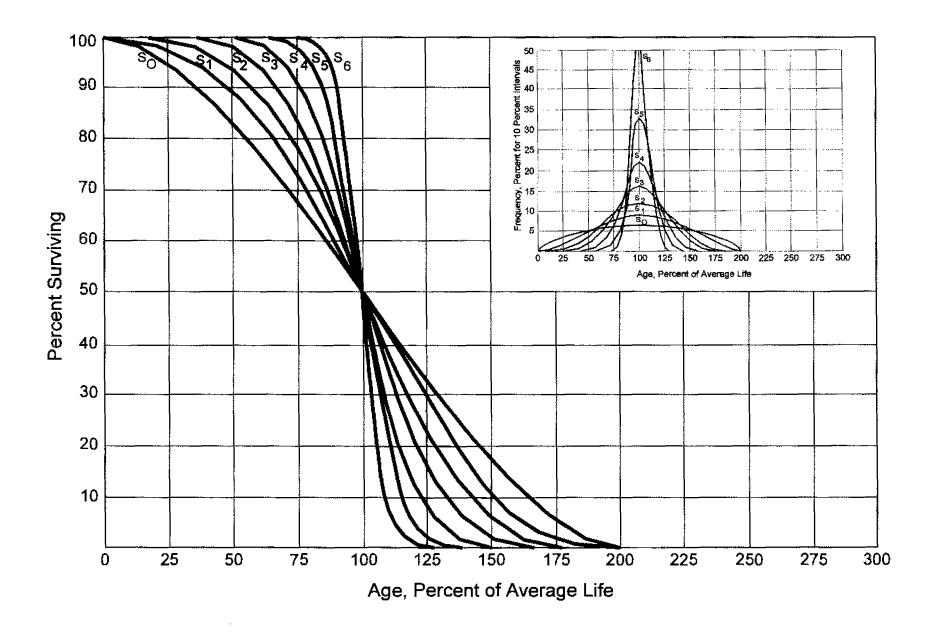


Figure 3. Symmetrical or "S" lowa Type Survivor Curves

presented in Figure 4, are those in which the greatest frequency occurs to the right of, or after, average service life. The origin moded curves, presented in Figure 5, are those in which the greatest frequency of retirement occurs at the origin, or immediately after age zero. The letter designation of each family of curves (L, S, R or O) represents the location of the mode of the associated frequency curve with respect to the average service life. The numbers represent the relative heights of the modes of the frequency curves within each family.

The lowa curves were developed at the lowa State College Engineering Experiment Station through an extensive process of observation and classification of the ages at which industrial property had been retired. A report of the study which resulted in the classification of property survivor characteristics into 18 type curves, which constitute three of the four families, was published in 1935 in the form of the Experiment Station's Bulletin 125.¹ These type curves have also been presented in subsequent Experiment Station bulletins and in the text, "Engineering Valuation and Depreciation." In 1957, Frank V. B. Couch, Jr., an lowa State College graduate student, submitted a thesis presenting his development of the fourth family consisting of the four O type survivor curves.

Retirement Rate Method of Analysis

The retirement rate method is an actuarial method of deriving survivor curves using the average rates at which property of each age group is retired. The method relates to

¹Winfrey, Robley. <u>Statistical Analyses of Industrial Property Retirements</u>. Iowa State College, Engineering Experiment Station, Bulletin 125. 1935.

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

³Couch, Frank V. B., Jr. "Classification of Type O Retirement Characteristics of Industrial Property." Unpublished M.S. thesis (Engineering Valuation). Library, Iowa State College, Ames, Iowa. 1957.

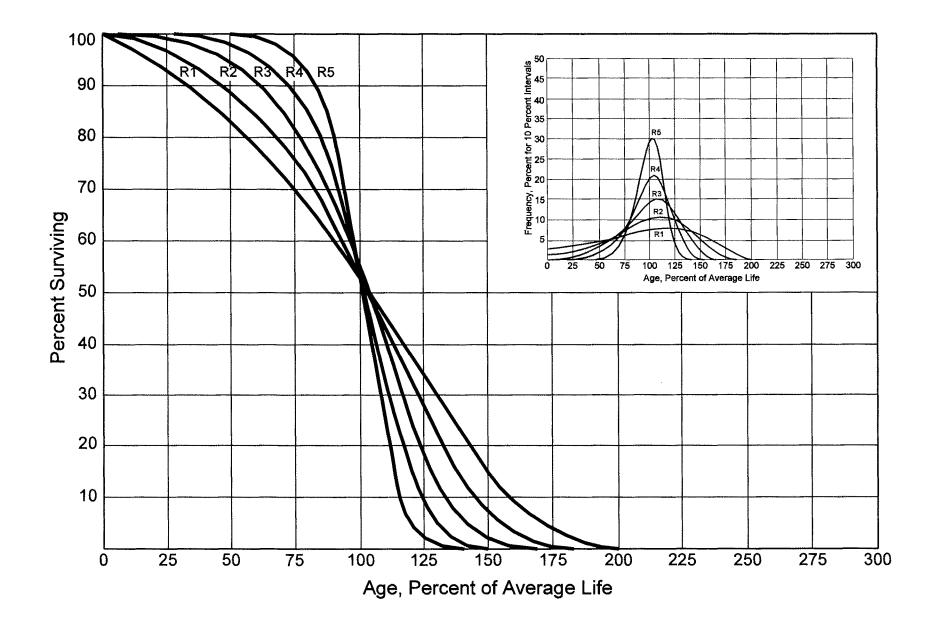


Figure 4. Right Modal or "R" lowa Type Survivor Curves

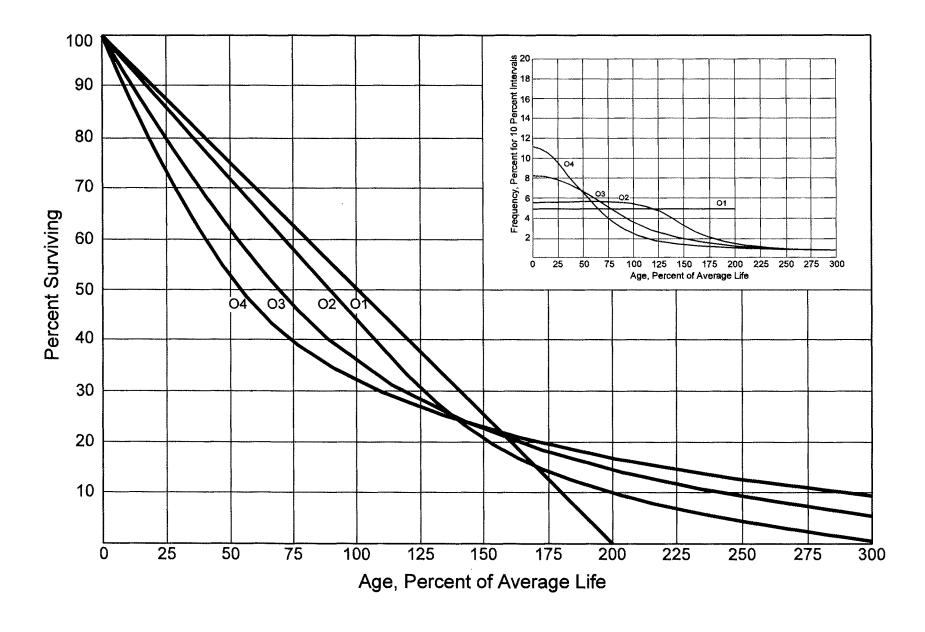


Figure 5. Origin Modal or "O" Iowa Type Survivor Curves

property groups for which aged accounting experience is available or for which aged accounting experience is developed by statistically aging unaged amounts and is the method used to develop the original stub survivor curves in this study. The method (also known as the annual rate method) is illustrated through the use of an example in the following text, and is also explained in several publications, including "Statistical Analyses of Industrial Property Retirements," "Engineering Valuation and Depreciation," and "Depreciation Systems."

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

Schedules of Annual Transactions in Plant Records. The property group used to illustrate the retirement rate method is observed for the experience band 2001-2010 during which there were placements during the years 1996-2010. In order to illustrate the summation of the aged data by age interval, the data were compiled in the manner

⁴Winfrey, Robley, Supra Note 1.

⁵Marston, Anson, Robley Winfrey, and Jean C. Hempstead, Supra Note 2.

⁶Wolf, Frank K. and W. Chester Fitch. <u>Depreciation Systems</u>. Iowa State University Press. 1994

presented in Tables 1 and 2 on pages II-12 and II-13. In Table 1, the year of installation (year placed) and the year of retirement are shown. The age interval during which a retirement occurred is determined from this information. In the example which follows, \$10,000 of the dollars invested in 1996 were retired in 2001. The \$10,000 retirement occurred during the age interval between 4½ and 5½ years on the basis that approximately one-half of the amount of property was installed prior to and subsequent to July 1 of each year. That is, on the average, property installed during a year is placed in service at the midpoint of the year for the purpose of the analysis. All retirements also are stated as occurring at the midpoint of a one-year age interval of time, except the first age interval which encompasses only one-half year.

The total retirements occurring in each age interval in a band are determined by summing the amounts for each transaction year-installation year combination for that age interval. For example, the total of \$143,000 retired for age interval $4\frac{1}{2}$ - $5\frac{1}{2}$ is the sum of the retirements entered on Table 1 immediately above the stairstep line drawn on the table beginning with the 2001 retirements of 1996 installations and ending with the 2010 retirements of the 2005 installations. Thus, the total amount of 143 for age interval $4\frac{1}{2}$ - $5\frac{1}{2}$ equals the sum of:

$$10 + 12 + 13 + 11 + 13 + 13 + 15 + 17 + 19 + 20$$
.

In Table 2, other transactions which affect the group are recorded in a similar manner. The entries illustrated include transfers and sales. The entries which are credits to the plant account are shown in parentheses. The items recorded on this schedule are

TABLE 1. RETIREMENTS FOR EACH YEAR 2001-2010 SUMMARIZED BY AGE INTERVAL

Experience Band 2001-2010

Placement Band 1996-2010

	Retirements, Thousands of Dollars											
Year	During Year									Total During	Age	
<u>Placed</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	Age Interval	Interval
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1996	10	11	12	13	14	16	23	24	25	26	26	13½-14½
1997	11	12	13	15	16	18	20	21	22	19	44	12½-13½
1998	11	12	13	14	16	17	19	21	22	18	64	11½-12½
1999	8	9	10	11	11	13	14	15	16	17	83	10½-11½
2000	9	10	11	12	13	_ 14	16	17	19	20	93	9½-10½
2001	4	9	10	11	12	13	_ 14	15	16	20	105	81/2-91/2
2002		5	11	12	13	14	15	16	18	20	113	7½-8½
2003			6	12	13	15	16	17	19	19	124	61/2-71/2
2004				6	13	15	16	17	19	19	131	5½-6½
2005					7	14	16	17	19	20	143	41/2-51/2
2006						8	18	20	22	23	146	31/2-41/2
2007							9	20	22	25	150	21/2-31/2
2008								11	23	25	151	11/2-21/2
2009									11	24	153	1/2-11/2
2010					68719331		*****			_13	80	0-1/2
Total	<u>53</u>	<u>68</u>	<u>86</u>	<u>106</u>	<u>128</u>	<u>157</u>	<u>196</u>	<u>231</u>	<u>273</u>	<u>308</u>	<u>1,606</u>	

TABLE 2. OTHER TRANSACTIONS FOR EACH YEAR 2001-2010 SUMMARIZED BY AGE INTERVAL

Experience Band 2001-2010

Placement Band 1996-2010

	Acquisitions, Transfers and Sales, Thousands of Dollars											
Year	During Year									Total During	Age	
<u>Placed</u>	<u>2001</u>	<u>2002</u>	2003	2004	2005	2006	2007	2008	2009	<u> 2010</u>	Age Interval	Interval
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1996	-	-	-		-	_	60°	-	-	-	_	13½-14½
1997	-	-	-	-	-	-	-	_	***	-	-	12½-13½
1998		-		-	-	-	-	-	_	-	~	11½-12½
1999	-	~	-	-	***		-	(5) ^b	-	-	60	10½-11½
2000	•••		-	-	-		-	6 ^a	***	-	-	9½-10½
2001		-	-	-	-	_	-	_	-	-	(5)	81/2-91/2
2002		-	-	-	-	-	-	-	-	-	6	71/2-81/2
2003			-	-	-	-	-	-	-	-		61/2-71/2
2004				-	-	-	-	(12) ^b	-	-	-	51/2-61/2
2005					**	•••	-	-	22°	-	-	41/2-51/2
2006						-	-	(19) ^b	-	-	10	31/2-41/2
2007							***	_	-	-		21/2-31/2
2008								-	_	$(102)^{c}$	(121)	11/2-21/2
2009									-	-	~	1/2-11/2
2010	******						_		_			0-1/2
Total	***	-	<u>-</u>	_	_	-	<u>60</u>	(<u>30</u>)	<u>22</u>	(<u>102</u>)	(<u>50</u>)	

^a Transfer Affecting Exposures at Beginning of Year ^b Transfer Affecting Exposures at End of Year ^c Sale with Continued Use

Parentheses denote Credit amount.

not totaled with the retirements but are used in developing the exposures at the beginning of each age interval.

Schedule of Plant Exposed to Retirement. The development of the amount of plant exposed to retirement at the beginning of each age interval is illustrated in Table 3 on page II-15.

The surviving plant at the beginning of each year from 2001 through 2010 is recorded by year in the portion of the table headed "Annual Survivors at the Beginning of the Year." The last amount entered in each column is the amount of new plant added to the group during the year. The amounts entered in Table 3 for each successive year following the beginning balance or addition are obtained by adding or subtracting the net entries shown on Tables 1 and 2. For the purpose of determining the plant exposed to retirement, transfers-in are considered as being exposed to retirement in this group at the beginning of the year in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the beginning of the following year. Thus, the amounts of plant shown at the beginning of each year are the amounts of plant from each placement year considered to be exposed to retirement at the beginning of each successive transaction year. For example, the exposures for the installation year 2006 are calculated in the following manner:

```
Exposures at age 0 = amount of addition = $750,000 

Exposures at age \frac{1}{2} = $750,000 - $8,000 = $742,000 

Exposures at age \frac{1}{2} = $742,000 - $18,000 = $724,000 

Exposures at age \frac{2}{2} = $724,000 - $20,000 - $19,000 = $685,000 

Exposures at age \frac{3}{2} = $685,000 - $22,000 = $663,000
```

For the entire experience band 2001-2010, the total exposures at the beginning of an age interval are obtained by summing diagonally in a manner similar to the summing