

EXHIBIT

Exhibit No.:

~~_____~~

Issue(s):

Cost of Service Study

Witness/Type of Exhibit:

Busch/Rebuttal

Sponsoring Party:

Public Counsel

Case No.:

WR-2003-0500

REBUTTAL TESTIMONY

FILED

JAN 23 2004

OF

Missouri Public
Service Commission

JAMES A. BUSCH

Submitted on Behalf of the Office of the Public Counsel

Missouri-American Water Company

Case No. WR-2003-0500

November 10, 2003

Exhibit No. ~~53~~ 54
Case No(s) WR-2003-0500
Date 12/16/03 Rptr SUM

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

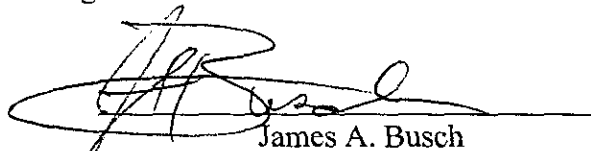
In the Matter of Missouri-American Water)
Company for Authority to File Tariffs)
Reflecting Increased Rates for Water) Case No. WR-2003-0500
and Sewer Service.)

AFFIDAVIT OF JAMES A. BUSCH

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

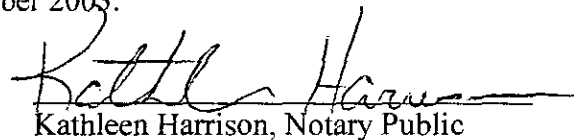
James A. Busch, of lawful age and being first duly sworn, deposes and states:

1. My name is James A. Busch. I am the Public Utility Economist for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony consisting of pages 1 through 5 and Schedules JAB-RD1-1 and JAB-RD1-9.
3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.


James A. Busch

Subscribed and sworn to me this 10th day of November 2003.

KATHLEEN HARRISON
Notary Public - State of Missouri
County of Cole
My Commission Expires Jan. 31, 2006


Kathleen Harrison, Notary Public

My commission expires January 31, 2006.

1 **REBUTTAL TESTIMONY**

2 **OF**

3 **JAMES A. BUSCH**

4 **CASE NO. WR-2003-0500**

5 **MISSOURI-AMERICAN WATER COMPANY**

6
7 Q. Please state your name and business address.

8 A. My name is James A. Busch and my business address is P. O. Box 7800,
9 Jefferson City, MO 65102.

10 Q. Are you the same James A. Busch who filed Direct Testimony in this proceeding?

11 A. Yes I am.

12 Q. What is the purpose of your Rebuttal Testimony in Case No. WR-2003-0500?

13 A. The purpose of my Rebuttal Testimony is to present an updated version of Public
14 Counsel's Class Cost of Service (CCOS) study for Missouri American Water
15 Company (MAWC) in this case.

16 Q. What components of your CCOS study did you update?

17 A. First, I updated the accounting information that has changed due to the prehearing
18 conference that was held between the parties. This updated information was
19 provided to OPC from Staff and included Staff's current case. Second, upon
20 further review of the CCOS studies filed by the Company and Staff, I altered an
21 allocator related to mains.

1 Q. Does your updated CCOS study include any major changes in the Staff's
2 accounting data that you used for the original CCOS study included with your
3 Direct Testimony?

4 A. Yes. As noted in my Direct Testimony, there was a revenue problem with the
5 Staff's accounting data. This problem was corrected and I used the new revenue
6 number in my updated CCOS study.

7 Q. What was the impact of the revenue change?

8 A. Initially, current revenues in the Jefferson City district were proposed to be
9 \$2,865,193. Now current revenues are corrected to be \$4,061,909. This change
10 means that instead of the substantial increase to the Jefferson City district that was
11 shown in the CCOS study in my Direct Testimony, the study now indicates that
12 there should be a slight decrease to the customers in Jefferson City.

13 Q. Please describe the change you made to your mains allocator.

14 A. In my first CCOS study, in determining maximum hour usage, I used the average
15 hourly consumption amount for each class as found in the Company's CCOS
16 study. This information was found in Schedule C, Factor 4, for each class. Upon
17 further review, I decided that a more reasonable maximum hour number to use
18 would be the Maximum Hour Extra Capacity figure found in the Company's
19 CCOS study workpapers (Schedule C, page 14) for each district.

20 Q. Why did you change your max hour factor?

21 A. I changed the max hour factor because I believe that using a number described as
22 the Maximum Hour Extra Capacity was better than using a usage number
23 described as Average Hourly Consumption. Since the goal of the allocator is to

1 determine the allocation between classes due to peaking needs, a maximum hour
2 consumption rate is a better fit than an average hour consumption rate.

3 Q. Did you make any other changes to your CCOS study?

4 A. Yes. In my direct testimony, using the revenues dollars provided by the Staff, I
5 inadvertently assigned Rate B revenues to Rate D and vice versa. In my updated
6 CCOS study, I corrected this error.

7 Q. Are there any other changes between your Direct Testimony and your Rebuttal
8 Testimony?

9 A. Yes. In my Direct Testimony, I presented a CCOS study summary for the St.
10 Louis County district showing a breakdown of Rate Class A between residential
11 and commercial customers. Since neither OPC nor any other party is
12 recommending that Rate Class A should be broken into two separate rate classes,
13 I have eliminated the CCOS study that separated Rate Class A into a residential
14 and commercial class.

15 Q. Do the changes in your CCOS study change OPC's overall rate design
16 recommendation in this case?

17 A. Public Counsel witness Barbara Meisenheimer discusses OPC's recommendation
18 for rate design in her Rebuttal Testimony.

19 Q. Do your changes affect the cost responsibilities among the classes?

20 A. Yes. There are some changes in costs responsibilities among the classes. Table 1
21 below shows the new cost responsibilities for each rate class in each district.

1

TABLE 1

	DISTRICT	TOTAL	RES	COMM	INDUS	OTHER PUBLIC AUTHORITY	SALES FOR RESALE	PRIVATE FIRE SERVICE
New COS %	Warrensburg	100.00%	53.15%	17.58%	3.56%	15.26%	9.39%	1.07%
Old COS %	Warrensburg	100.00%	53.58%	17.43%	3.47%	15.13%	9.26%	1.14%
New COS %	St. Joseph	100.00%	44.56%	19.23%	17.43%	4.50%	12.56%	1.73%
Old COS %	St. Joseph	100.00%	45.01%	19.14%	17.17%	4.47%	12.43%	1.78%
New COS %	St. Charles	100.00%	86.94%	10.34%	0.05%	1.69%	0.00%	0.98%
Old COS %	St. Charles	100.00%	87.06%	10.16%	0.05%	1.67%	0.00%	1.06%
New COS %	Parkville	100.00%	70.33%	15.28%	0.70%	3.65%	8.98%	1.06%
Old COS %	Parkville	100.00%	70.39%	15.24%	0.69%	3.64%	8.90%	1.14%
New COS %	Mexico	100.00%	46.51%	14.06%	15.71%	8.98%	13.78%	0.96%
Old COS %	Mexico	100.00%	46.86%	14.04%	15.52%	8.95%	13.61%	1.01%
New COS %	Joplin	100.00%	47.68%	20.60%	21.78%	2.73%	5.90%	1.30%
Old COS %	Joplin	100.00%	48.72%	20.46%	20.84%	2.72%	5.83%	1.43%
New COS %	Jefferson City	100.00%	52.84%	39.41%	5.52%	1.23%	0.00%	1.01%
Old COS %	Jefferson City	100.00%	53.59%	38.66%	5.39%	1.30%	0.00%	1.06%
New COS %	Brunswick	100.00%	49.10%	12.8%	0.37%	1.94%	34.53%	1.25%
Old COS %	Brunswick	100.00%	48.86%	13.42%	0.37%	1.92%	34.08%	1.34%
	District	Total	Rate A		Rate J & D	Rate B	Pub. Fire	Private Fire
New COS %	St. Louis County	100.00%	78.63%		11.63%	2.95%	6.30%	0.49%
Old COS %	St. Louis County	100.00%	79.49%		10.89%	2.78%	6.29%	0.56%

2
3
4

Please note that for St. Louis County, the rate classes are, from left to right, Rate Class A, Rate Class J & D, Rate Class B, Public Fire (Rate Class E), and Private Fire (Rate Class F). Also, the St. Louis County comparison is to the Schedule

1 JAB – 2 – 8b in my Direct Testimony that describes St. Louis County with its
2 current rate classifications.

3 Q. What conclusions can you draw from Table 1?

4 A. Table 1 basically shows that with the updates made to my CCOS studies, that the
5 residential class revenue requirements are slightly less than the residential revenue
6 requirements indicated in my Direct Testimony. The only district where this is
7 not true is Brunswick. Overall, there do not appear to be any significant changes,
8 except in Jefferson City.

9 Q. Please describe Schedule JAB – RD1.

10 A. Schedule JAB – RD1 simply shows the results of my CCOS studies, similar to
11 Schedule JAB – 2 in my Direct Testimony.

12 Q. Does this conclude your Rebuttal Testimony?

13 A. Yes it does.

Office of the Public Counsel
MAWC Class Cost of Service Summary

Brunswick District

CLASS COST OF SERVICE SUMMARY:		TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER PUBLIC AUTHORITY	SALES FOR RESALE	PRIVATE FIRE SERVICE	PUBLIC FIRE SERVICE
1	O & M Expenses	\$ 290,561	\$ 131,605	\$ 37,379	\$ 1,265	\$ 6,682	\$ 114,427	\$ 187	\$ (983)
2	Depreciation Expenses	\$ 39,694	\$ 18,423	\$ 4,826	\$ 96	\$ 637	\$ 12,888	\$ 293	\$ 2,530
3	Taxes	\$ (42,884)	\$ (20,237)	\$ (5,134)	\$ (86)	\$ (607)	\$ (12,644)	\$ (436)	\$ (3,740)
4	TOTAL Expenses and Taxes	\$ 287,371	\$ 129,791	\$ 37,071	\$ 1,275	\$ 6,711	\$ 114,672	\$ 44	\$ (2,193)
5									
6	Spread public fire expenses & taxes to others	15 \$ (2,193)	\$ (1,795)	\$ (360)	\$ (10)	\$ (29)	\$ -	\$ -	\$ 2,193
7	TOTAL Expenses and Taxes after Spread	\$ 287,371	\$ 127,996	\$ 36,711	\$ 1,266	\$ 6,682	\$ 114,672	\$ 44	\$ -
8									
9	Current Revenue								
10	Rate Revenue	\$ 199,534	\$ 100,464	\$ 25,039	\$ 744	\$ 3,552	\$ 64,974	\$ 4,761	\$ -
11	Other Revenue	25 \$ 9,594	\$ 4,136	\$ 1,222	\$ 48	\$ 242	\$ 3,972	\$ (26)	\$ -
12	TOTAL Current Revenues	\$ 209,128	\$ 104,600	\$ 26,261	\$ 792	\$ 3,794	\$ 68,946	\$ 4,735	\$ -
13	Current Revenue Percentage	100.00%	50.02%	12.56%	0.38%	1.81%	32.97%	2.26%	0.00%
14									
15	OPERATING INCOME	\$ (78,243)	\$ (23,396)	\$ (10,450)	\$ (474)	\$ (2,888)	\$ (45,726)	\$ 4,691	\$ -
16									
17	TOTAL Rate Base	\$ 780,696	\$ 363,087	\$ 94,766	\$ 1,949	\$ 12,596	\$ 250,056	\$ 6,163	\$ 52,078
18									
19	Spread public fire rate base to others	15 \$ 52,078	\$ 42,620	\$ 8,547	\$ 228	\$ 684	\$ -	\$ -	\$ (52,078)
20	TOTAL Rate Base after Spread	\$ 780,696	\$ 405,707	\$ 103,313	\$ 2,177	\$ 13,280	\$ 250,056	\$ 6,163	\$ -
21									
22	Implicit Rate of Return (ROR)	-10.02%	-5.77%	-10.11%	-21.75%	-21.75%	-18.29%	76.11%	
23									
24	Operating Income with Equalized ROR	\$ (78,243)	\$ (40,661)	\$ (10,354)	\$ (218)	\$ (1,331)	\$ (25,061)	\$ (618)	
25									
26	Class COS with Equalized ROR	\$ 209,128	\$ 87,335	\$ 26,356	\$ 1,047	\$ 5,351	\$ 89,611	\$ (573)	
27	Class COS Percentage	100.00%	41.76%	12.60%	0.50%	2.56%	42.85%	-0.27%	
28									
29	OPC Recommended ROR	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	
30									
31	Operating Income with Recommended ROR	\$ 58,162	\$ 30,225	\$ 7,697	\$ 162	\$ 989	\$ 18,629	\$ 459	
32	True-up plus add'l taxes	25 \$ 97,050	\$ 41,836	\$ 12,360	\$ 487	\$ 2,450	\$ 40,179	\$ (262)	
33	Class COS with Recommended ROR	\$ 442,583	\$ 217,321	\$ 56,672	\$ 1,659	\$ 8,565	\$ 152,816	\$ 5,550	
34	Class COS Percentage	100.00%	49.10%	12.80%	0.37%	1.94%	34.53%	1.25%	
		233,455	129,986	30,316	612	3,213	63,205	6,123	

Office of the Public Counsel
MAWC Class Cost of Service Summary

Jefferson City District

CLASS COST OF SERVICE SUMMARY:	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER PUBLIC AUTHORITY	SALES FOR RESALE	PRIVATE FIRE SERVICE	PUBLIC FIRE SERVICE
1 O & M Expenses	\$ 2,439,006	\$ 1,278,658	\$ 928,148	\$ 130,868	\$ 32,587	\$ -	\$ 20,067	\$ 48,678
2 Depreciation Expenses	\$ 353,567	\$ 159,020	\$ 141,007	\$ 20,170	\$ 3,690	\$ -	\$ 4,522	\$ 25,158
3 Taxes	\$ 534,079	\$ 243,196	\$ 212,059	\$ 30,529	\$ 5,605	\$ -	\$ 6,872	\$ 35,817
4 TOTAL Expenses and Taxes	\$ 3,326,651	\$ 1,680,874	\$ 1,281,214	\$ 181,566	\$ 41,882	\$ -	\$ 31,461	\$ 109,653
5								
6 Spread public fire expen	15 \$ 109,653	\$ 91,440	\$ 17,634	\$ 145	\$ 434	\$ -	\$ -	\$ (109,653)
7 TOTAL Expenses and Taxes after Spread	\$ 3,326,651	\$ 1,772,314	\$ 1,298,848	\$ 181,711	\$ 42,317	\$ -	\$ 31,461	\$ -
8								
9 Current Revenue								
10 Rate Revenue	\$ 4,061,909	\$ 2,136,076	\$ 1,576,356	\$ 183,869	\$ 53,218	\$ (103)	\$ 112,493	\$ -
11 Other Revenue	25 \$ 26,671	\$ 13,756	\$ 10,768	\$ 1,530	\$ 338	\$ -	\$ 280	\$ -
12 TOTAL Current Revenues	\$ 4,088,580	\$ 2,149,832	\$ 1,587,124	\$ 185,399	\$ 53,556	\$ (103)	\$ 112,773	\$ -
13 Current Revenue Percentage	100.00%	52.58%	38.82%	4.53%	1.31%	0.00%	2.76%	0.00%
14								
15 OPERATING INCOME	\$ 761,929	\$ 377,518	\$ 288,275	\$ 3,688	\$ 11,239	\$ (103)	\$ 81,312	\$ -
16								
17 TOTAL Rate Base	\$ 9,437,081	\$ 4,249,142	\$ 3,771,173	\$ 543,107	\$ 96,562	\$ -	\$ 121,617	\$ 655,480
18								
19 Spread public fire rate b	15 \$ 655,480	\$ 546,604	\$ 105,413	\$ 866	\$ 2,597	\$ -	\$ -	\$ (655,480)
20 TOTAL Rate Base after Spread	\$ 9,437,081	\$ 4,795,746	\$ 3,876,587	\$ 543,973	\$ 99,159	\$ -	\$ 121,617	\$ -
21								
22 Implicit Rate of Return (ROR)	8.07%	7.87%	7.44%	0.68%	11.33%	#DIV/0!	66.86%	
23								
24 Operating Income with Equalized ROR	\$ 761,929	\$ 387,198	\$ 312,987	\$ 43,919	\$ 8,006	\$ -	\$ 9,819	
25								
26 Class COS with Equalized ROR	\$ 4,088,580	\$ 2,159,512	\$ 1,611,836	\$ 225,630	\$ 50,323	\$ -	\$ 41,280	
27 Class COS Percentage	100.00%	52.82%	39.42%	5.52%	1.23%	0.00%	1.01%	
28								
29 OPC Recommended ROR	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	
30								
31 Operating Income with Recommended ROR	\$ 703,063	\$ 357,283	\$ 288,806	\$ 40,526	\$ 7,387	\$ -	\$ 9,060	
32 True-up plus add'l taxes	25 \$ 32,940	\$ 16,988	\$ 13,298	\$ 1,890	\$ 417	\$ -	\$ 346	
33 Class COS with Recommended ROR	\$ 4,062,653	\$ 2,146,585	\$ 1,600,953	\$ 224,127	\$ 50,121	\$ -	\$ 40,868	
34 Class COS Percentage	100.00%	52.84%	39.41%	5.52%	1.23%	0.00%	1.01%	
	\$ (25,927)	\$ (12,927)	\$ (10,883)	\$ (1,504)	\$ (202)	\$ -	\$ (412)	

Office of the Public Counsel
MAWC Class Cost of Service Summary

Joplin District

CLASS COST OF SERVICE SUMMARY:	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER PUBLIC AUTHORITY	SALES FOR RESALE	PRIVATE FIRE SERVICE	PUBLIC FIRE SERVICE
1 O & M Expenses	\$ 3,985,307	\$ 1,843,528	\$ 815,716	\$ 859,150	\$ 118,579	\$ 229,958	\$ 32,545	\$ 85,831
2 Depreciation Expenses	\$ 740,156	\$ 337,731	\$ 146,602	\$ 155,438	\$ 17,709	\$ 42,756	\$ 14,265	\$ 25,655
3 Taxes	\$ 1,253,814	\$ 546,074	\$ 250,501	\$ 279,177	\$ 30,598	\$ 76,768	\$ 22,323	\$ 48,373
4 TOTAL Expenses and Taxes	\$ 5,979,277	\$ 2,727,334	\$ 1,212,820	\$ 1,293,764	\$ 166,885	\$ 349,482	\$ 69,133	\$ 159,859
5								
6 Spread public fire expens	15 \$ 159,859	\$ 136,960	\$ 21,230	\$ 624	\$ 1,045	\$ -	\$ -	\$ (159,859)
7 TOTAL Expenses and Taxes after Spread	\$ 5,979,277	\$ 2,864,293	\$ 1,234,050	\$ 1,294,389	\$ 167,930	\$ 349,482	\$ 69,133	\$ -
8								
9 Current Revenue								
10 Rate Revenue	\$ 7,921,626	\$ 4,040,879	\$ 1,645,100	\$ 1,411,576	\$ 207,254	\$ 420,287	\$ 196,530	\$ -
11 Other Revenue	25 \$ 170,992	\$ 79,402	\$ 35,604	\$ 38,444	\$ 4,744	\$ 10,441	\$ 2,357	\$ -
12 TOTAL Current Revenues	\$ 8,092,618	\$ 4,120,281	\$ 1,680,704	\$ 1,450,020	\$ 211,998	\$ 430,728	\$ 198,887	\$ -
13 Current Revenue Percentage	100.00%	50.91%	20.77%	17.92%	2.62%	5.32%	2.46%	0.00%
14								
15 OPERATING INCOME	\$ 2,113,341	\$ 1,255,987	\$ 446,654	\$ 155,631	\$ 44,067	\$ 81,246	\$ 129,754	\$ -
16								
17 TOTAL Rate Base	\$ 20,195,579	\$ 8,759,850	\$ 4,025,755	\$ 4,500,943	\$ 485,236	\$ 1,240,065	\$ 374,699	\$ 809,031
18								
19 Spread public fire rate ba	15 \$ 809,031	\$ 693,141	\$ 107,443	\$ 3,159	\$ 5,289	\$ -	\$ -	\$ (809,031)
20 TOTAL Rate Base after Spread	\$ 20,195,579	\$ 9,452,991	\$ 4,133,198	\$ 4,504,102	\$ 490,525	\$ 1,240,065	\$ 374,699	\$ -
21								
22 Implicit Rate of Return (ROR)	10.46%	13.29%	10.81%	3.46%	8.98%	6.55%	34.63%	
23								
24 Operating Income with Equalized ROR	\$ 2,113,341	\$ 989,196	\$ 432,513	\$ 471,326	\$ 51,330	\$ 129,765	\$ 39,210	
25								
26 Class COS with Equalized ROR	\$ 8,092,618	\$ 3,853,490	\$ 1,666,563	\$ 1,765,715	\$ 219,261	\$ 479,247	\$ 108,343	
27 Class COS Percentage	100.00%	47.62%	20.59%	21.82%	2.71%	5.92%	1.34%	
28								
29 OPC Recommended ROR	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	
30								
31 Operating Income with Recommended ROR	\$ 1,504,571	\$ 704,248	\$ 307,923	\$ 335,556	\$ 36,544	\$ 92,385	\$ 27,915	
32 True-up plus add'l taxes	25 \$ 15,995	\$ 7,428	\$ 3,331	\$ 3,596	\$ 444	\$ 977	\$ 220	
33 Class COS with Recommended ROR	\$ 7,499,843	\$ 3,575,969	\$ 1,545,304	\$ 1,633,540	\$ 204,918	\$ 442,844	\$ 97,268	
34 Class COS Percentage	100.00%	47.68%	20.60%	21.78%	2.73%	5.90%	1.30%	
	(592,775)	(277,521)	(121,259)	(132,174)	(14,343)	(36,404)	(11,074)	

Office of the Public Counsel
MAWC Class Cost of Service Summary

Mexico District

CLASS COST OF SERVICE SUMMARY:	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER PUBLIC AUTHORITY	SALES FOR RESALE	PRIVATE FIRE SERVICE	PUBLIC FIRE SERVICE
1 O & M Expenses	\$ 1,270,132	\$ 570,166	\$ 175,030	\$ 195,373	\$ 120,482	\$ 170,553	\$ 8,467	\$ 30,061
2 Depreciation Expenses	\$ 369,759	\$ 161,935	\$ 50,709	\$ 57,624	\$ 30,721	\$ 50,521	\$ 4,765	\$ 13,484
3 Taxes	\$ 295,206	\$ 126,689	\$ 40,595	\$ 47,179	\$ 25,096	\$ 41,681	\$ 3,455	\$ 10,512
4 TOTAL Expenses and Taxes	\$ 1,935,097	\$ 858,790	\$ 266,333	\$ 300,176	\$ 176,299	\$ 262,756	\$ 16,686	\$ 54,056
5								
6 Spread public fire expe	15 \$ 54,056	\$ 47,487	\$ 5,244	\$ 245	\$ 1,080	\$ -	\$ -	\$ (54,056)
7 TOTAL Expenses and Taxes after Spread	\$ 1,935,097	\$ 906,277	\$ 271,578	\$ 300,421	\$ 177,379	\$ 262,756	\$ 16,686	\$ -
8								
9 Current Revenue								
10 Rate Revenue	\$ 2,489,592	\$ 1,197,432	\$ 349,161	\$ 303,511	\$ 192,976	\$ 368,933	\$ 77,579	\$ -
11 Other Revenue	25 \$ 35,702	\$ 16,199	\$ 5,064	\$ 5,753	\$ 3,293	\$ 5,048	\$ 345	\$ -
12 TOTAL Current Revenues	\$ 2,525,294	\$ 1,213,631	\$ 354,225	\$ 309,264	\$ 196,269	\$ 373,981	\$ 77,924	\$ -
13 Current Revenue Percentage	100.00%	48.06%	14.03%	12.25%	7.77%	14.81%	3.09%	0.00%
14								
15 OPERATING INCOME	\$ 590,197	\$ 307,354	\$ 82,647	\$ 8,843	\$ 18,889	\$ 111,226	\$ 61,238	\$ -
16								
17 TOTAL Rate Base	\$ 10,704,032	\$ 4,592,884	\$ 1,475,233	\$ 1,720,223	\$ 901,793	\$ 1,521,059	\$ 127,238	\$ 365,602
18								
19 Spread public fire rate	15 \$ 365,602	\$ 321,172	\$ 35,468	\$ 1,657	\$ 7,305	\$ -	\$ -	\$ (365,602)
20 TOTAL Rate Base after Spread	\$ 10,704,032	\$ 4,914,056	\$ 1,510,702	\$ 1,721,880	\$ 909,097	\$ 1,521,059	\$ 127,238	\$ -
21								
22 Implicit Rate of Return (ROR)	5.51%	6.25%	5.47%	0.51%	2.08%	7.31%	48.13%	
23								
24 Operating Income with Equalized ROR	\$ 590,197	\$ 270,950	\$ 83,297	\$ 94,941	\$ 50,126	\$ 83,868	\$ 7,016	
25								
26 Class COS with Equalized ROR	\$ 2,525,294	\$ 1,177,227	\$ 354,874	\$ 395,362	\$ 227,505	\$ 346,623	\$ 23,702	
27 Class COS Percentage	100.00%	46.62%	14.05%	15.66%	9.01%	13.73%	0.94%	
28								
29 OPC Recommended ROR	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	
30								
31 Operating Income with Recommended ROR	\$ 797,450	\$ 366,097	\$ 112,547	\$ 128,280	\$ 67,728	\$ 113,319	\$ 9,479	
32 True-up plus add'l tax	25 \$ 127,067	\$ 57,655	\$ 18,023	\$ 20,475	\$ 11,719	\$ 17,967	\$ 1,228	
33 Class COS with Recommended ROR	\$ 2,859,614	\$ 1,330,029	\$ 402,148	\$ 449,176	\$ 256,825	\$ 394,041	\$ 27,394	
34 Class COS Percentage	100.00%	46.51%	14.06%	15.71%	8.98%	13.78%	0.96%	
	\$ 334,320	\$ 152,802	\$ 47,274	\$ 53,815	\$ 29,321	\$ 47,418	\$ 3,692	

Office of the Public Counsel
MAWC Class Cost of Service Summary

Parkville District

CLASS COST OF SERVICE SUMMARY:	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER PUBLIC AUTHORITY	SALES FOR RESALE	PRIVATE FIRE SERVICE	PUBLIC FIRE SERVICE
1 O & M Expenses	\$ 1,266,253	\$ 862,758	\$ 188,105	\$ 10,094	\$ 51,062	\$ 111,326	\$ 7,680	\$ 35,228
2 Depreciation Expenses	\$ 283,069	\$ 181,466	\$ 41,579	\$ 1,660	\$ 8,989	\$ 24,333	\$ 4,257	\$ 20,785
3 Taxes	\$ 646,863	\$ 407,686	\$ 96,267	\$ 3,860	\$ 20,676	\$ 58,591	\$ 9,392	\$ 50,391
4 TOTAL Expenses and Taxes	\$ 2,196,184	\$ 1,451,909	\$ 325,951	\$ 15,613	\$ 80,727	\$ 194,250	\$ 21,329	\$ 106,404
5								
6 Spread public fire expen	15 \$ 106,404	\$ 98,057	\$ 6,787	\$ 253	\$ 1,307	\$ -	\$ -	\$ (106,404)
7 TOTAL Expenses and Taxes after Spread	\$ 2,196,184	\$ 1,549,966	\$ 332,738	\$ 15,866	\$ 82,034	\$ 194,250	\$ 21,329	\$ -
8								
9 Current Revenue								
10 Rate Revenue	\$ 2,790,861	\$ 1,996,043	\$ 386,411	\$ 14,832	\$ 96,380	\$ 230,612	\$ 66,583	\$ -
11 Other Revenue	25 \$ 31,464	\$ 21,771	\$ 4,953	\$ 228	\$ 1,187	\$ 2,972	\$ 353	\$ -
12 TOTAL Current Revenues	\$ 2,822,325	\$ 2,017,814	\$ 391,364	\$ 15,060	\$ 97,567	\$ 233,584	\$ 66,936	\$ -
13 Current Revenue Percentage	100.00%	71.49%	13.87%	0.53%	3.46%	8.28%	2.37%	0.00%
14								
15 OPERATING INCOME	\$ 626,141	\$ 467,847	\$ 58,626	\$ (806)	\$ 15,534	\$ 39,334	\$ 45,607	\$ -
16								
17 TOTAL Rate Base	\$ 8,534,966	\$ 5,369,711	\$ 1,287,544	\$ 50,864	\$ 273,147	\$ 790,454	\$ 118,061	\$ 645,184
18								
19 Spread public fire rate b	15 \$ 645,184	\$ 594,572	\$ 41,155	\$ 1,534	\$ 7,924	\$ -	\$ -	\$ (645,184)
20 TOTAL Rate Base after Spread	\$ 8,534,966	\$ 5,964,282	\$ 1,328,699	\$ 52,398	\$ 281,071	\$ 790,454	\$ 118,061	\$ -
21								
22 Implicit Rate of Return (ROR)	7.34%	7.84%	4.41%	-1.54%	5.53%	4.98%	38.63%	
23								
24 Operating Income with Equalized ROR	\$ 626,141	\$ 437,551	\$ 97,476	\$ 3,844	\$ 20,620	\$ 57,989	\$ 8,661	
25								
26 Class COS with Equalized ROR	\$ 2,822,325	\$ 1,987,518	\$ 430,214	\$ 19,710	\$ 102,654	\$ 252,239	\$ 29,991	
27 Class COS Percentage	100.00%	70.42%	15.24%	0.70%	3.64%	8.94%	1.06%	
28								
29 OPC Recommended ROR	6.98%	6.98%	6.98%	6.98%	6.98%	6.98%	6.98%	
30								
31 Operating Income with Recommended ROR	\$ 595,741	\$ 416,307	\$ 92,743	\$ 3,657	\$ 19,619	\$ 55,174	\$ 8,241	
32 True-up plus add'l taxes	25 \$ 249,465	\$ 172,611	\$ 39,271	\$ 1,807	\$ 9,414	\$ 23,562	\$ 2,799	
33 Class COS with Recommended ROR	\$ 3,041,390	\$ 2,138,885	\$ 464,752	\$ 21,331	\$ 111,067	\$ 272,985	\$ 32,370	
34 Class COS Percentage	100.00%	70.33%	15.28%	0.70%	3.65%	8.98%	1.06%	
	\$ 219,065	\$ 151,367	\$ 34,538	\$ 1,621	\$ 8,413	\$ 20,746	\$ 2,379	

Office of the Public Counsel
MAWC Class Cost of Service Summary

St Charles District

CLASS COST OF SERVICE SUMMARY:	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER PUBLIC AUTHORITY	SALES FOR RESALE	PRIVATE FIRE SERVICE	PUBLIC FIRE SERVICE
1 O & M Expenses	\$ 2,582,064	\$ 2,176,043	\$ 250,361	\$ 1,398	\$ 45,915	\$ -	\$ 15,268	\$ 93,078
2 Depreciation Expenses	\$ 883,173	\$ 687,143	\$ 87,895	\$ 391	\$ 14,252	\$ -	\$ 11,074	\$ 82,417
3 Taxes	\$ 2,027,747	\$ 1,567,305	\$ 209,659	\$ 955	\$ 32,930	\$ -	\$ 23,654	\$ 193,243
4 TOTAL Expenses and Taxes	\$ 5,492,985	\$ 4,430,491	\$ 547,916	\$ 2,745	\$ 93,098	\$ -	\$ 49,996	\$ 368,739
5								
6 Spread public fire expen	15 \$ 368,739	\$ 356,075	\$ 11,803	\$ 26	\$ 835	\$ -	\$ -	\$ (368,739)
7 TOTAL Expenses and Taxes after Spread	\$ 5,492,985	\$ 4,786,566	\$ 559,719	\$ 2,771	\$ 93,932	\$ -	\$ 49,996	\$ -
8								
9 Current Revenue								
10 Rate Revenue	\$ 8,532,537	\$ 7,293,020	\$ 959,095	\$ 4,301	\$ 159,115	\$ -	\$ 117,006	\$ -
11 Other Revenue	25 \$ 149,175	\$ 128,388	\$ 16,398	\$ 79	\$ 2,704	\$ -	\$ 1,606	\$ -
12 TOTAL Current Revenues	\$ 8,681,712	\$ 7,421,408	\$ 975,493	\$ 4,380	\$ 161,819	\$ -	\$ 118,612	\$ -
13 Current Revenue Percentage	100.00%	85.48%	11.24%	0.05%	1.86%	0.00%	1.37%	0.00%
14								
15 OPERATING INCOME	\$ 3,188,728	\$ 2,634,842	\$ 415,774	\$ 1,609	\$ 67,886	\$ -	\$ 68,616	\$ -
16								
17 TOTAL Rate Base	\$ 31,838,271	\$ 24,626,472	\$ 3,329,375	\$ 15,135	\$ 520,689	\$ -	\$ 363,058	\$ 2,983,543
18								
19 Spread public fire rate b	15 \$ 2,983,543	\$ 2,881,076	\$ 95,500	\$ 214	\$ 6,753	\$ -	\$ -	\$ (2,983,543)
20 TOTAL Rate Base after Spread	\$ 31,838,271	\$ 27,507,548	\$ 3,424,875	\$ 15,349	\$ 527,441	\$ -	\$ 363,058	\$ -
21								
22 Implicit Rate of Return (ROR)	10.02%	9.58%	12.14%	10.48%	12.87%	#DIV/0!	18.90%	
23								
24 Operating Income with Equalized ROR	\$ 3,188,728	\$ 2,754,989	\$ 343,015	\$ 1,537	\$ 52,825	\$ -	\$ 36,362	
25								
26 Class COS with Equalized ROR	\$ 8,681,712	\$ 7,541,555	\$ 902,733	\$ 4,309	\$ 146,758	\$ -	\$ 86,358	
27 Class COS Percentage	100.00%	86.87%	10.40%	0.05%	1.69%	0.00%	0.99%	
28								
29 OPC Recommended ROR	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	
30								
31 Operating Income with Recommended ROR	\$ 2,371,951	\$ 2,049,312	\$ 255,153	\$ 1,143	\$ 39,294	\$ -	\$ 27,048	
32 True-up plus add'l taxes	25 \$ (239,967)	\$ (206,528)	\$ (26,378)	\$ (128)	\$ (4,349)	\$ -	\$ (2,584)	
33 Class COS with Recommended ROR	\$ 7,624,969	\$ 6,629,350	\$ 788,494	\$ 3,787	\$ 128,877	\$ -	\$ 74,460	
34 Class COS Percentage	100.00%	86.94%	10.34%	0.05%	1.69%	0.00%	0.98%	
	\$ (1,056,743)	\$ (912,205)	\$ (114,239)	\$ (521)	\$ (17,880)	\$ -	\$ (11,898)	

Office of the Public Counsel
MAWC Class Cost of Service Summary

St Joseph District

CLASS COST OF SERVICE SUMMARY:		TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER PUBLIC AUTHORITY	SALES FOR RESALE	PRIVATE FIRE SERVICE	PUBLIC FIRE SERVICE
1	O & M Expenses	\$ 5,665,101	\$ 2,644,533	\$ 1,033,722	\$ 884,245	\$ 252,194	\$ 622,454	\$ 113,867	\$ 114,086
2	Depreciation Expenses	\$ 1,674,679	\$ 669,096	\$ 317,878	\$ 297,830	\$ 73,491	\$ 216,708	\$ 41,859	\$ 57,817
3	Taxes	\$ 3,045,757	\$ 1,204,844	\$ 588,437	\$ 559,592	\$ 137,071	\$ 407,774	\$ 46,898	\$ 101,141
4	TOTAL Expenses and Taxes	\$ 10,385,537	\$ 4,518,472	\$ 1,940,037	\$ 1,741,667	\$ 462,757	\$ 1,246,937	\$ 202,624	\$ 273,043
5									
6	Spread public fire expenses & taxes to	15 \$ 273,043	\$ 243,095	\$ 27,050	\$ 1,232	\$ 1,666	\$ -	\$ -	\$ (273,043)
7	TOTAL Expenses and Taxes after Spread	\$ 10,385,537	\$ 4,761,567	\$ 1,967,087	\$ 1,742,900	\$ 464,423	\$ 1,246,937	\$ 202,624	\$ -
8									
9	Current Revenue								
10	Rate Revenue	\$ 16,132,289	\$ 7,460,256	\$ 3,138,385	\$ 2,671,085	\$ 653,376	\$ 2,054,560	\$ 154,627	\$ -
11	Other Revenue	25 \$ 188,014	\$ 81,274	\$ 36,679	\$ 33,723	\$ 8,670	\$ 24,321	\$ 3,348	\$ -
12	TOTAL Current Revenues	\$ 16,320,303	\$ 7,541,530	\$ 3,175,064	\$ 2,704,808	\$ 662,046	\$ 2,078,881	\$ 157,975	\$ -
13	Current Revenue Percentage	100.00%	46.21%	19.45%	16.57%	4.06%	12.74%	0.97%	0.00%
14									
15	OPERATING INCOME	\$ 5,934,766	\$ 2,779,963	\$ 1,207,977	\$ 961,909	\$ 197,623	\$ 831,944	\$ (44,649)	\$ -
16									
17	TOTAL Rate Base	\$ 76,869,343	\$ 30,237,921	\$ 14,951,404	\$ 14,300,632	\$ 3,479,589	\$ 10,432,393	\$ 1,024,278	\$ 2,443,125
18									
19	Spread public fire rate base to others	15 \$ 2,443,125	\$ 2,175,152	\$ 242,037	\$ 11,026	\$ 14,909	\$ -	\$ -	\$ (2,443,125)
20	TOTAL Rate Base after Spread	\$ 76,869,343	\$ 32,413,074	\$ 15,193,442	\$ 14,311,658	\$ 3,494,498	\$ 10,432,393	\$ 1,024,278	\$ -
21									
22	Implicit Rate of Return (ROR)	7.72%	8.58%	7.95%	6.72%	5.66%	7.97%	-4.36%	
23									
24	Operating Income with Equalized ROR	\$ 5,934,766	\$ 2,502,480	\$ 1,173,023	\$ 1,104,944	\$ 269,796	\$ 805,442	\$ 79,080	
25									
26	Class COS with Equalized ROR	\$ 16,320,303	\$ 7,264,047	\$ 3,140,110	\$ 2,847,844	\$ 734,219	\$ 2,052,379	\$ 281,704	
27	Class COS Percentage	100.00%	44.51%	19.24%	17.45%	4.50%	12.58%	1.73%	
28									
29	OPC Recommended ROR	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	
30									
31	Operating Income with Recommended ROR	\$ 5,726,766	\$ 2,414,774	\$ 1,131,911	\$ 1,066,219	\$ 260,340	\$ 777,213	\$ 76,309	
32	True-up plus add'l taxes	25 \$ (192,293)	\$ (83,123)	\$ (37,513)	\$ (34,491)	\$ (8,867)	\$ (24,874)	\$ (3,424)	
33	Class COS with Recommended ROR	\$ 15,920,010	\$ 7,093,218	\$ 3,061,485	\$ 2,774,628	\$ 715,895	\$ 1,999,276	\$ 275,508	
34	Class COS Percentage	100.00%	44.56%	19.23%	17.43%	4.50%	12.56%	1.73%	
		\$ (400,293)	\$ (170,830)	\$ (78,625)	\$ (73,216)	\$ (18,323)	\$ (53,103)	\$ (6,196)	

Office of the Public Counsel
MAWC Class Cost of Service Summary

St. Louis County District

CLASS COST OF SERVICE SUMMARY:	TOTAL	Rate A and others	Rate B	Rate J & D	PRIVATE FIRE SERVICE	PUBLIC FIRE SERVICE
1 O & M Expenses	\$ 55,339,107	\$ 44,772,772	\$ 1,575,215	\$ 6,472,765	\$ 219,647	\$ 2,298,708
2 Depreciation Expenses	\$ 10,480,307	\$ 8,004,792	\$ 316,125	\$ 1,209,813	\$ 61,394	\$ 888,182
3 Taxes	\$ 22,102,000	\$ 16,867,682	\$ 677,079	\$ 2,555,308	\$ 127,017	\$ 1,874,913
4 TOTAL Expenses and Taxes	\$ 87,921,414	\$ 69,645,247	\$ 2,568,419	\$ 10,237,887	\$ 408,058	\$ 5,061,803
5						
6 Spread public fire expenses & tax	15 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7 TOTAL Expenses and Taxes after Spread	\$ 87,921,414	\$ 69,645,247	\$ 2,568,419	\$ 10,237,887	\$ 408,058	\$ 5,061,803
8						
9 Current Revenue						
10 Rate Revenue	\$ 115,960,456	\$ 98,414,824	\$ 2,158,918	\$ 8,245,315	\$ 1,212,727	\$ 5,928,672
11 Other Revenue	25 \$ 2,983,573	\$ 2,339,760	\$ 88,407	\$ 346,767	\$ 14,834	\$ 193,805
12 TOTAL Current Revenues	\$ 118,944,029	\$ 100,754,584	\$ 2,247,325	\$ 8,592,082	\$ 1,227,561	\$ 6,122,477
13 Current Revenue Percentage	100.00%	84.71%	1.89%	7.22%	1.03%	5.15%
14						
15 OPERATING INCOME	\$ 31,022,615	\$ 31,109,337	\$ (321,095)	\$ (1,645,805)	\$ 819,504	\$ 1,060,674
16						
17 TOTAL Rate Base	\$ 282,017,396	\$ 214,759,127	\$ 8,702,411	\$ 32,621,733	\$ 1,666,442	\$ 24,267,684
18						
19 Spread public fire rate base to othe	15 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20 TOTAL Rate Base after Spread	\$ 282,017,396	\$ 214,759,127	\$ 8,702,411	\$ 32,621,733	\$ 1,666,442	\$ 24,267,684
21						
22 Implicit Rate of Return (ROR)	11.00%	14.49%	-3.69%	-5.05%	49.18%	4.37%
23						
24 Operating Income with Equalized ROR	\$ 31,022,615	\$ 23,624,038	\$ 957,287	\$ 3,588,472	\$ 183,313	\$ 2,669,506
25						
26 Class COS with Equalized ROR	\$ 118,944,029	\$ 93,269,285	\$ 3,525,706	\$ 13,826,358	\$ 591,371	\$ 7,731,309
27 Class COS Percentage	100.00%	78.41%	2.96%	11.62%	0.50%	6.50%
28						
29 OPC Recommended ROR	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%
30						
31 Operating Income with Recommended ROR	\$ 21,010,296	\$ 15,999,555	\$ 648,330	\$ 2,430,319	\$ 124,150	\$ 1,807,942
32 True-up plus add'l taxes	25 \$ (6,187,870)	\$ (4,852,615)	\$ (183,354)	\$ (719,187)	\$ (30,766)	\$ (401,947)
33 Class COS with Recommended ROR	\$ 102,743,839	\$ 80,792,187	\$ 3,033,395	\$ 11,949,018	\$ 501,441	\$ 6,467,798
34 Class COS Percentage	100.00%	78.63%	2.95%	11.63%	0.49%	6.30%
	\$ (16,200,189)	\$ (12,477,098)	\$ (492,312)	\$ (1,877,340)	\$ (89,929)	\$ (1,263,511)

Office of the Public Counsel
MAWC Class Cost of Service Summary

Warrensburg District

CLASS COST OF SERVICE SUMMARY:		TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER PUBLIC AUTHORITY	SALES FOR RESALE	PRIVATE FIRE SERVICE	PUBLIC FIRE SERVICE
1	O & M Expenses	\$ 949,015	\$ 482,900	\$ 160,966	\$ 33,006	\$ 149,869	\$ 84,065	\$ 6,525	\$ 31,685
2	Depreciation Expenses	\$ 249,945	\$ 122,253	\$ 42,546	\$ 8,600	\$ 35,598	\$ 22,800	\$ 3,407	\$ 14,741
3	Taxes	\$ 514,357	\$ 239,664	\$ 88,266	\$ 18,574	\$ 76,155	\$ 50,513	\$ 6,807	\$ 34,377
4	TOTAL Expenses and Taxes	\$ 1,713,317	\$ 844,817	\$ 291,777	\$ 60,180	\$ 261,622	\$ 157,379	\$ 16,740	\$ 80,803
5									
6	Spread public fire expenses & taxes t	15 \$ 80,803	\$ 71,227	\$ 7,671	\$ 166	\$ 1,739	\$ -	\$ -	\$ (80,803)
7	TOTAL Expenses and Taxes after Spread	\$ 1,713,317	\$ 916,044	\$ 299,449	\$ 60,346	\$ 263,361	\$ 157,379	\$ 16,740	\$ -
8									
9	Current Revenue								
10	Rate Revenue	\$ 2,470,700	\$ 1,252,514	\$ 469,991	\$ 77,174	\$ 408,314	\$ 209,250	\$ 53,457	\$ -
11	Other Revenue	25 \$ 54,043	\$ 27,600	\$ 9,761	\$ 2,031	\$ 8,648	\$ 5,386	\$ 617	\$ -
12	TOTAL Current Revenues	\$ 2,524,743	\$ 1,280,114	\$ 479,752	\$ 79,205	\$ 416,962	\$ 214,636	\$ 54,074	\$ -
13	Current Revenue Percentage	100.00%	50.70%	19.00%	3.14%	16.52%	8.50%	2.14%	0.00%
14									
15	OPERATING INCOME	\$ 811,425	\$ 364,071	\$ 180,303	\$ 18,858	\$ 153,601	\$ 57,257	\$ 37,334	\$ -
16									
17	TOTAL Rate Base	\$ 9,051,349	\$ 4,191,496	\$ 1,561,859	\$ 330,861	\$ 1,348,604	\$ 903,176	\$ 118,099	\$ 597,255
18									
19	Spread public fire rate base to others	15 \$ 597,255	\$ 526,473	\$ 56,701	\$ 1,229	\$ 12,852	\$ -	\$ -	\$ (597,255)
20	TOTAL Rate Base after Spread	\$ 9,051,349	\$ 4,717,968	\$ 1,618,560	\$ 332,089	\$ 1,361,457	\$ 903,176	\$ 118,099	\$ -
21									
22	Implicit Rate of Return (ROR)	8.96%	7.72%	11.14%	5.68%	11.28%	6.34%	31.61%	
23									
24	Operating Income with Equalized ROR	\$ 811,425	\$ 422,951	\$ 145,099	\$ 29,771	\$ 122,050	\$ 80,967	\$ 10,587	
25									
26	Class COS with Equalized ROR	\$ 2,524,743	\$ 1,338,995	\$ 444,548	\$ 90,117	\$ 385,411	\$ 238,345	\$ 27,327	
27	Class COS Percentage	100.00%	53.03%	17.61%	3.57%	15.27%	9.44%	1.08%	
28									
29	OPC Recommended ROR	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	7.45%	
30									
31	Operating Income with Recommended ROR	\$ 674,326	\$ 351,489	\$ 120,583	\$ 24,741	\$ 101,429	\$ 67,287	\$ 8,798	
32	True-up plus add'l taxes	25 \$ (67,377)	\$ (34,411)	\$ (12,169)	\$ (2,532)	\$ (10,781)	\$ (6,715)	\$ (769)	
33	Class COS with Recommended ROR	\$ 2,320,265	\$ 1,233,121	\$ 407,862	\$ 82,555	\$ 354,008	\$ 217,950	\$ 24,769	
34	Class COS Percentage	100.00%	53.15%	17.58%	3.56%	15.26%	9.39%	1.07%	
		\$ (204,477)	\$ (105,873)	\$ (36,686)	\$ (7,562)	\$ (31,403)	\$ (20,395)	\$ (2,558)	