

Exhibit No.: _____

Issue(s):

Rate Design

Witness/Type of Exhibit:

Busch/Direct

Sponsoring Party:

Public Counsel

Case Nos.:

WR-2000-281 and SR-2000-282

DIRECT TESTIMONY

OF

JAMES A. BUSCH

FILED²

APR 06 2000

Missouri Public
Service Commission

Submitted on Behalf of the Office of the Public Counsel

MISSOURI-AMERICAN WATER COMPANY

Case Nos.: WR-2000-281 and SR-2000-282

April 6, 2000

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

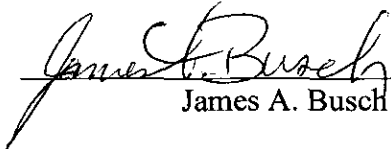
| | | |
|--|---|---------------------------------------|
| In the matter of Missouri-American |) | |
| Water Company's Tariff designed to |) | |
| Implement General Rate Increases for |) | Case Nos. WR-2000-281 and SR-2000-282 |
| Water and Sewer Service Provided to |) | |
| Customers in the Missouri Service Area |) | |
| Of the Company. |) | |

AFFIDAVIT OF JAMES A. BUSCH

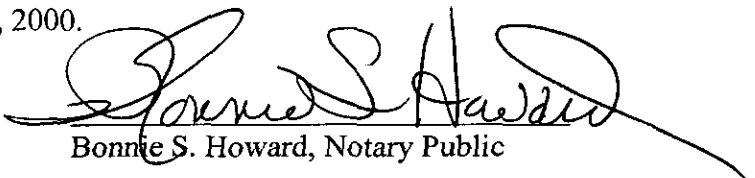
| | | |
|-------------------|---|----|
| STATE OF MISSOURI |) | |
| |) | ss |
| COUNTY OF COLE |) | |

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 direct testimony consisting of pages 1 through 14 and Schedules JAB-1 through JAB-5.
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 6th day of April, 2000.


Bonnie S. Howard, Notary Public

My Commission expires May 3, 2001.



1 A. Yes. Attached is Schedule JAB-1 which is a list of the cases in which I
2 have filed testimony before this Commission.

3 Q. What is the purpose of your testimony?

4 A. The purpose of my testimony is to provide Public Counsel's proposed rate
5 design methodology.

6 Q. Could you please give a brief description of the Missouri American Water
7 Company service areas?

8 A. Yes. Missouri American Water Company serves seven separate and
9 distinct districts throughout the State of Missouri. The seven districts are Brunswick,
10 Joplin, Mexico, Parkville, St. Charles, St. Joseph, and Warrensburg. The makeup of the
11 customers is shown in Table 1 as follows:

12 Table 1

| District | Residential | Commercial | Industrial | OPA* | Resale | Private Fire |
|-------------|-------------|------------|------------|------|--------|--------------|
| Brunswick | 398 | 73 | 3 | 6 | 1 | 5 |
| Joplin | 18,502 | 3,085 | 60 | 135 | 8 | 268 |
| Mexico | 4,321 | 479 | 13 | 99 | 2 | 63 |
| Parkville | 4,043 | 303 | 11 | 45 | 3 | 60 |
| St. Charles | 25,002 | 807 | 2 | 59 | 0 | 101 |
| St. Joseph | 27,237 | 3,188 | 107 | 191 | 11 | 334 |
| Warrensburg | 5,207 | 587 | 14 | 127 | 2 | 60 |

13 *OPA - Other Public Authority

14 In terms of resource supply, the districts of Brunswick, Mexico, Parkville,
15 and Warrensburg are supplied with well water. The Joplin district is mainly supplied
16 from Shoal Creek with additional water supplied from wells. The St. Joseph district is
17 supplied from the Missouri River, and the St. Charles district acquires its water supply
18 from the St. Charles County Water Plant and the City of St. Louis' Howard Bend Water
19 Plant.

1 Q. Was a class cost of service study prepared by Public Counsel?

2 A. Yes, Public Counsel witness Hong Hu has prepared and filed a district
3 specific class cost-of-service study.

4 Q. Has the Commission previously considered rate design issues for MAWC?

5 A. Yes. In Case No. WO-98-204 the Commission considered two different
6 types of rate designs proposed in Missouri-American Water Company's (MAWC)
7 previous rate case, Case No. WR-97-237. The two rate design proposals were Single
8 Tariff Pricing (STP) proposed by MAWC and Staff, and District Specific Pricing (DSP).
9 Due to a lack of district specific costs in the rate case, WO-98-204 was established to
10 determine those costs. The Commission, upon hearing the arguments from all parties,
11 decided to delay issuing its order determining the appropriate rate design until MAWC
12 filed its next rate case.

13 Q. What were some of the reasons the Commission cited in deciding to wait
14 until this proceeding to make a decision on the appropriate rate design for MAWC?

15 A. The main reason cited by the Commission in the Report and Order in Case
16 No. WO-98-204 was its anticipation that the new treatment plant being built in the St.
17 Joseph district would need to be added to the rate structure before a proper decision could
18 be made. Also, there was the issue of a pending merger between MAWC and St. Louis
19 County Water Company.

20 Q. Which of these issues are currently before the Commission?

21 A. In this case the new treatment facility in St. Joseph is the driving factor for
22 the Company's requested rate increase. The rates for the St. Louis County Water
23 Company are not an issue.

1 Q. What type of rate design is Public Counsel recommending?

2 A. Public Counsel is recommending that the Commission approve a rate
3 design that moves away from STP. Public Counsel's rate design is a compromise
4 between STP and DSP. Considering the magnitude of the investment in the St. Joseph
5 district, Public Counsel feels that it is in the best interest of all ratepayers to avoid
6 utilizing either district specific rates or system wide uniform rates in this particular rate
7 case.

8 Q. What type of pricing does MAWC currently utilize?

9 A. Currently, MAWC utilizes single tariff pricing.

10 Q. What is single tariff pricing, and what are some of its benefits according to
11 the Company?

12 A. STP, also referred to as uniform pricing, is a form of rate design in which
13 all consumers within a particular customer class are charged according to the same rate
14 schedule regardless of the district in which they are located.

15 According to the Company, the main benefit for the consumers is stable
16 rates. The Company has argued that charging the same rate to each district protects its
17 customers from the effects of rate volatility. The Company has also been in support of
18 STP because it claims that there are certain operational and financial costs that are
19 centralized and need to be allocated to each district anyway. The Company also claims
20 that another justification for uniform rates is the same service is provided regardless of
21 where the customer is located.

22 Q. Does STP imply that the underlying cost characteristics are uniform?

1 A. No, it does not. STP is a revenue recovery method that may not be
2 reflective of the causative assignment of costs. This is especially true of the relationship
3 between MAWC's district specific costs and the uniform service rates the Company
4 charges its customers.

5 Q. What are the primary cost drivers in providing water service?

6 A. The most significant cost drivers are the source of water supply, the water
7 treatment process, the proximity of the source to the specific service territory, the
8 aggregate water demand, and customer density. These cost drivers vary significantly for
9 the non-contiguous districts served by MAWC. Therefore, MAWC's district specific
10 costs are not uniform.

11 Q. What is DSP, and what are some of its benefits?

12 A. District specific pricing is a form of rate design in which the consumers in
13 a particular customer class in different districts are charged rates that are tied to the
14 specific costs associated with providing service to that district.

15 The main benefit of district specific pricing is that the consumers in a
16 given district pay simply for the costs to serve that district. Generally, consumers are
17 willing to pay for the services that they receive. Also, DSP should theoretically help to
18 keep the Company from building extravagant, unnecessary facilities. It is this
19 accountability that drives a Company toward efficient investment. A selling point to a
20 district to build a huge new facility would be that due to uniform rates, the costs would be
21 spread among the entire company's ratepayers. If the ratepayers in a district knew that
22 any new investment would come from only their pocket, they may not be so eager to
23 have the new facility built.

1 Q. Why is Public Counsel supporting a move away from single tariff pricing?

2 A. Public Counsel does not believe that the above-mentioned reasons in
3 support of STP are all positive or reasonable justification for uniform rates in this case.
4 First, the Company controls rate volatility. It alone determines when and how much is
5 going to be spent in any given district. Additional investment in plant is the main driver
6 for rate increases. Besides, after an initial increase in rates due to an increase in
7 investment, rates could fall. It is doubtful that too many consumers would be upset with
8 decreased rates. Furthermore, the claim that uniform rates help stabilize rates has been
9 proven false in this rate case. A proposed 53.97% increase in rates is anything but stable.

10 The argument that customers are receiving the same service is not
11 convincing. The districts receive their water supply from different sources. This means
12 that there could be different levels of treatment that the water must go through before it is
13 safe to drink. Also, there could be issues of differing hardness levels, overall taste, and
14 odor considerations. In order to address these issues, many consumers end up paying
15 additional costs. These costs include purchasing home filtration systems, water softeners,
16 or buying bottled drinking water to name a few. The claim that each district receives the
17 same level of overall service is simply not true.

18 Finally, I agree that there are centralized functions the Company provides
19 that benefits all customers. This is one reason why mergers may be acceptable;
20 economies of scale exist that benefit all consumers. However, to base all rates on these
21 benefits is not in the public interest in this proceeding.

22 Q. If Public Counsel supports district specific pricing why are you not
23 recommending setting rates equivalent to district specific costs?

1 A. Due to the movement towards uniform rates over the past few rate cases,
2 returning to DSP completely could pose some serious rate shock considerations to certain
3 districts. Public Counsel believes that in this rate case, considering the huge expenditure
4 made in the St. Joseph district and the history of rate design in previous cases a slower
5 approach should be utilized by the Commission to implement district specific rates based
6 on the cost of providing service to those districts. Furthermore, the cost of service is
7 simply a guide used to set rates.

8 Q. Does Public Counsel always support district specific pricing?

9 A. No. Public Counsel's task is to recommend the best policy for all
10 ratepayers it represents. Therefore, Public Counsel weighs the merits of each and every
11 case to determine the proper recommendation it should propose to protect the ratepayers
12 for each company that is regulated by the Commission. In this case, it is Public
13 Counsel's recommendation that a compromise between the two polar opposite forms of
14 rate design be utilized.

15 Q. What recommendation does Public Counsel have for the implementation
16 of rates for the seven districts served by MAWC?

17 A. With respect to the goal of proposing rates that are just and reasonable for
18 all consumers of MAWC, Public Counsel thinks that the rates should be set in such a
19 manner that would move MAWC's rates away from STP, but also try to mitigate the rate
20 shock that will result from the addition of the new plant in St. Joseph. First, the proper
21 cost of servicing each class of customer in each district needs to be determined. This
22 proper amount can only be determined after the Commission has heard and weighed all
23 of the testimony that will be presented in this case. This includes Public Counsel's

1 recommendation of plant reduction as discussed in Public Counsel witness Ted Biddy's
2 Direct Testimony, as well as other adjustments proposed by other parties in this case.
3 Once the proper levels of costs are determined and allocated, the Commission must
4 decide on the appropriate rate structure needed to collect the necessary revenues.

5 Q. What is Public Counsel's recommendation of the appropriate rate structure
6 to collect the Commission approved revenues?

7 A. Once the Commission determines the proper costs, rates should be set
8 within the following guidelines. Based on current revenues being collected, within
9 reasonable bounds, no district would receive a decrease in rates when another district is
10 receiving an increase. Any extra revenues collected from districts paying more than their
11 cost of service will be allocated to the smaller districts in a way that balances the rate
12 increases among those districts.

13 To further illustrate this point, Public Counsel's proposal would affect the
14 districts as follows: (1) The Joplin district in the first year will receive no more than a
15 10% increase in rates and no increases thereafter. (2) The small districts of Brunswick,
16 Mexico, and Parkville will share the additional revenue to equalize their district specific
17 revenue increase; and (3) St. Joseph, St. Charles, and Warrensburg will be brought to
18 their respective levels of cost of service.

19 Q. Does Public Counsel's proposed rate structure require tariffs to be
20 changed to reflect the full resulting increase immediately?

21 A. Due to the potential for dramatic increases in rates, Public Counsel also
22 recommends that rates be phased-in where the increase in revenues from a particular
23 district would be greater than 15%. Under Public Counsel proposal, rates for any given

1 year will be targeted not to increase rates more than 15% of current revenues for any
2 given district in any given year during the phase-in period. Rates should be sufficient to
3 recover the needed revenues after the appropriate phase-in period. The phase-in
4 proposed requires that each district will have its own phase-in period.

5 Q. Does your phase-in cap mean that the Company will get a 15% increase in
6 revenues each year?

7 A. No. Each district will be limited to a 15% cap. This means that because
8 not all districts will be receiving a 15% increase each year, the overall revenue increase
9 for the entire Company will be somewhat less than 15% annually.

10 Q. Could you provide an example of your methodology?

11 A. Yes. Attached to my Direct Testimony is Schedule JAB-2 showing the
12 aggregate impact on each district of the above rate design in the event the Company's
13 numbers are approved by the Commission, using Public Counsel's rate of return.
14 Schedule JAB-2 uses the class cost of service study attached to Public Counsel witness
15 Hong Hu's testimony. This study incorporates the numbers provided by the Company
16 and assumes Public Counsel's recommended rate of return. The use of the Company's
17 numbers in no way indicates that Public Counsel is accepting any position proposed by
18 the Company. These were the only numbers available to Public Counsel in sufficient
19 detail to conduct the study.

20 The schedule shows that by moving completely to a district specific rate
21 design, all districts will experience some rate increase. It shows that the biggest increases
22 would be to the Brunswick, St. Joseph, Mexico, and Parkville districts. This is indicative
23 of the move from STP to DSP and the addition of the St. Joseph treatment facility. In

1 order to mitigate some of the rate shock associated with the proposed changes, the Joplin
2 district would be charged a rate that would recover revenues equal only a ten percent
3 above its current revenues to help in the Company's move towards DSP. The added
4 revenues collected from Joplin would then be applied as shown in the schedule to help
5 reduce the impact on Brunswick, Parkville, and Mexico. The increase for Joplin would
6 be lower than Company's proposed 53.97% increase under STP. The increase in rates as
7 set out in Schedule JAB-2 is not a reflection of Public Counsel's proposed rate levels; it
8 is just an illustration of the proposed methodology being recommended by Public
9 Counsel, using Company data.

10 Q. Are there any other factors that are responsible for the increase in rates
11 among the districts?

12 A. Yes. The following table shows the increase in investment in all
13 districts, excluding St. Joseph.

| | |
|---------------------|---------------|
| 14 Brunswick | \$ 96,730 |
| 15 Joplin | \$ 3,615,565 |
| 16 Mexico | \$ 6,521,302 |
| 17 Parkville | \$ 5,287,431 |
| 18 St. Charles | \$ 5,766,928 |
| 19 Warrensburg | \$ 6,639,033 |
| 20 Corporate Office | \$ 3,229,536 |
| 21 Total | \$ 31,156,525 |

22 These figures were taken from page 6, lines 10 – 18 of Company witness

1 Robert L. Amman JR's Direct Testimony, and leaves out the St. Joseph Treatment
2 facility.

3 Q. What did you mean when you stated earlier that each district would have
4 its own phase-in period?

5 A. Utilizing the percentages from my previous example, you can see that
6 each district will have a different overall rate increase. Since we are limiting any increase
7 from any district to 15%, it will take each district a set amount of time to achieve their
8 proper rate level. For instance, the Joplin district will receive its increase in its entirety in
9 the first year. The rest are as follows: St. Charles district, two-years; Warrensburg
10 district, three-years; Brunswick, Mexico, and Parkville districts, five-years; and St.
11 Joseph district, seven-years. These estimates of number of years required for the phase-
12 in does not take into account any ultimate Commission approved adjustment to
13 Company's proposed rate increase and takes into account an estimated of any inherent
14 carrying costs. Specific time frames will be calculated when the overall revenue
15 requirement is finalized and district specific rate design is approved.

16 Q. Please explain Schedule JAB-3.

17 A. Schedule JAB-3 shows the increase in the district specific costs from the
18 prior rate case to this case. I compared the results of Ms. Hu's study for this case with
19 the results of Public Counsel witness Ryan Kind's district specific class cost of service
20 study he conducted in Case No. WO-98-204, attached as Schedule JAB-4. This
21 comparison shows the impact of the above-mentioned investment on each district.

22 Q. What is your recommendation concerning inter-class shifts within each
23 district?

1 A. We propose to achieve inter-class shifts as an adjustment to the district
2 caps. The adjustment will cause each customer class to move no more than half way to
3 inter-district class cost of service. The adjustment will be calculated as half of the
4 difference of the class cost of service percent and the previous year revenue percent. This
5 adjustment will be made to each district's increase until the phase-in is complete.
6 Attached to my testimony is Schedule JAB-5 which shows the revenue that will be
7 collected from each class in the first year of the phase-in.

8 Q. How did Public Counsel determine that 15% was an appropriate limit for a
9 district-specific yearly rate increase?

10 A. In this unique case, Public Counsel felt that this level of increase would be
11 in the best interests of the ratepayers. The percentage increase is approximately the same
12 level of increase that United Water Missouri implemented in the first year of their two-
13 step increase approved in Case No. WR-99-297.

14 Q. Why does Public Counsel believe that this methodology provides a more
15 reasonable approach than STP?

16 A. Utilizing a STP approach, every customer in the MAWC system will be
17 supporting the new plant in St. Joseph. Not only will they be supporting it, but they will
18 also be paying rates that are a 53.97% increase (according to MAWC's filing) over the
19 previous rates for a project that will not improve their water service in the least bit. On
20 the other extreme, if the Commission moves to totally district specific rates, consumers in
21 certain districts may end up paying more than double their existing rates. Uniform rates
22 do not mitigate the potential rate shock to all districts. Uniform rates would impose an
23 unjust 53.97% increase of rates for the approximately 80% of MAWC customers who

1 will never benefit from the major cause of the increase. Furthermore, an immediate
2 53.97% system wide increase of rates constitutes rate shock in and of itself.

3 Q. How would you respond to the argument that the ratepayers in the St.
4 Joseph district have been subsidizing ratepayers in the other districts?

5 A. The St. Joseph district has only been associated with the districts of
6 Warrensburg, Parkville, Mexico, Brunswick, and St. Charles since the merger of 1995
7 between MAWC and Missouri Cities Water Company. So, if there has been any
8 subsidization from St. Joseph's ratepayers, it has only occurred during the past few years.
9 Further, any prior subsidization will be wiped out by the enormity of the plant, which is
10 being built solely for the St. Joseph ratepayers, and is the primary cause for the extreme
11 increase in rates for this case.

12 Another reason often cited for the use of uniform rates is that it spreads
13 cost equally to all consumers. This is usually done for the benefit of the ratepayers in the
14 smaller districts. The argument for STP in this case is by spreading the extra costs
15 associated with the smaller districts to the larger districts would lessen the overall impact
16 on the consumers. The larger customer base of the bigger district would allow for a
17 smaller increase in rates when improvements are made to the smaller district. In this
18 case, the opposite is true. The St. Joseph district is the largest district served by MAWC.
19 If all consumers of MAWC are required to pay for the total cost of the new treatment
20 facility being built for the St. Joseph customers, the smaller districts will end up
21 supporting the largest district. This is the opposite effect that STP is designed to have on
22 a company's ratepayers. In fact, considering the support already taking place from the
23 larger districts to the smaller districts, the middle size districts, Joplin, St. Charles, and

1 Warrensburg would actually be supporting not only Brunswick, Mexico, and Parkville,
2 but also St. Joseph.

3 Q. Does this conclude your Direct Testimony?

4 A. Yes it does.

Cases of Filed Testimony
James A. Busch

| <u>Company</u> | <u>Case No.</u> |
|--------------------------|-------------------|
| Union Electric Company | GR-97-393 |
| Missouri Gas Energy | GR-98-140 |
| Laclede Gas Company | GO-98-484 |
| Laclede Gas Company | GR-98-374 |
| St. Joseph Light & Power | GR-99-246 |
| Laclede Gas Company | GT-99-303 |
| Laclede Gas Company | GR-99-315 |
| Fiber Four Corporation | TA-00-23; et. al. |

Office of Public Counsel
District Adjustment
for Missouri-American Water Company
Case No. WR-2000-281

Before

| District | Current Revenues | Cost of Service | Percent Increase for DSP |
|-------------|---------------------|--------------------|--------------------------------|
| Brunswick | \$ 112,117 | \$ 330,598 | 194.87% |
| Joplin | \$ 7,195,963 | \$ 7,476,989 | 3.91% |
| Mexico | \$ 1,528,886 | \$ 2,768,714 | 81.09% |
| Parkville | \$ 1,448,193 | \$ 2,475,922 | 70.97% |
| St. Charles | \$ 7,173,569 | \$ 9,121,273 | 27.15% |
| St. Joseph | \$ 9,535,067 | \$ 18,372,710 | 92.69% |
| Warrensburg | \$ 1,810,502 | \$ 2,490,364 | 37.55% |
| Total | \$ 28,804,297 | \$ 43,036,570 | 49.41% |

Move Joplin to a 10% increase.
This creates \$438,561 in revenue
to be shared.
(\$7,915,550 - \$7,476,989)
Proposed sharing methodology:
Divide extra revenue from Joplin
among Brunswick, Mexico, and
Parkville to equalize the percent
revenue increase.

After

| | Current Revenues | Proposed Revenues | Percent Increase after sharing |
|-------------|---------------------|----------------------|---|
| Brunswick | \$ 112,117 | \$ 330,598 | 194.87% |
| Joplin | \$ 7,195,963 | \$ 7,915,550 | 10.00% |
| Mexico | \$ 1,528,886 | \$ 2,768,714 | 81.09% |
| Parkville | \$ 1,448,193 | \$ 2,475,922 | 70.97% |
| St. Charles | \$ 7,173,569 | \$ 9,121,273 | 27.15% |
| St. Joseph | \$ 9,535,067 | \$ 18,372,710 | 92.69% |
| Warrensburg | \$ 1,810,502 | \$ 2,490,364 | 37.55% |
| Total | \$ 28,804,297 | \$ 43,475,131 | |

These amounts will be phased-in at no more than 15% a year
over current revenues.

Office of Public Counsel
Comparison of COS Studies
for Missouri-American Water Company
Case No. WR-2000-281

| District | Current Revenues | Current Cost of Service | OPC's WO-98-204 | |
|-------------|---------------------|----------------------------|--------------------|---------|
| | | | Cost of Service | |
| Brunswick | \$ 112,117 | \$ 330,598 | \$ 336,039 | -1.62% |
| Joplin | \$ 7,195,963 | \$ 7,476,989 | \$ 6,807,616 | 9.83% |
| Mexico | \$ 1,528,886 | \$ 2,768,714 | \$ 2,098,740 | 31.92% |
| Parkville | \$ 1,448,193 | \$ 2,475,922 | \$ 1,638,457 | 51.11% |
| St. Charles | \$ 7,173,569 | \$ 9,121,273 | \$ 7,878,743 | 15.77% |
| St. Joseph | \$ 9,535,067 | \$ 18,372,710 | \$ 8,614,270 | 113.28% |
| Warrensburg | \$ 1,810,502 | \$ 2,490,364 | \$ 1,613,602 | 54.34% |
| | \$ 28,804,297 | \$ 43,036,570 | \$ 28,987,467 | 48% |

TOTAL COMPANY

CLASS COST OF SERVICE SUMMARY:

| | | TOTAL | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | OTHER PUBLIC AUTHORITY | SALES FOR RESALE | FIRE SERVICE |
|----|---|--------------|-------------|------------|------------|---------------------------|---------------------|--------------|
| 1 | O & M Expenses | 14,300,244 | 8,456,481 | 2,657,631 | 1,487,413 | 576,582 | 813,784 | 308,353 |
| 2 | Depreciation Expenses | 2,788,865 | 1,603,457 | 509,016 | 222,400 | 116,524 | 126,040 | 211,428 |
| 3 | Taxes | 4,801,375 | 2,849,881 | 946,728 | 358,557 | 217,323 | 204,793 | 224,094 |
| 4 | TOTAL 1 - Expenses and Taxes | 21,890,484 | 12,909,818 | 4,113,375 | 2,068,370 | 910,429 | 1,144,616 | 743,875 |
| 5 | | | | | | | | |
| 6 | Spread fire expenses & taxes to others | 14 743,875 | 634,016 | 97,669 | 6,465 | 5,725 | 0 | (743,875) |
| 7 | TOTAL 2- Expenses and Taxes | 21,890,484 | 13,543,834 | 4,211,044 | 2,074,835 | 916,154 | 1,144,616 | - |
| 8 | | | | | | | | |
| 9 | Current Revenue (non-gas) | | | | | | | |
| 10 | Rate Revenue (non-gas) | 28,671,423 | 18,702,301 | 5,239,133 | 2,200,795 | 903,760 | 1,185,733 | 439,701 |
| 11 | Other Revenue | 23 153,027 | 88,518 | 29,789 | 13,838 | 6,839 | 7,763 | 6,281 |
| 12 | TOTAL 1- Current Revenues | 28,824,450 | 18,790,819 | 5,268,922 | 2,214,633 | 910,599 | 1,193,496 | 445,982 |
| 13 | | | | | | | | |
| 14 | Spread fire revenues to others | 14 445,982 | 380,117 | 58,556 | 3,876 | 3,432 | 0 | (445,982) |
| 15 | TOTAL 2- Current Revenues | 28,824,450 | 19,170,936 | 5,327,478 | 2,218,509 | 914,032 | 1,193,496 | - |
| 16 | Current Revenue Percentage | 100.00% | 66.51% | 18.48% | 7.70% | 3.17% | 4.14% | 0.00% |
| 17 | | | | | | | | |
| 18 | OPERATING INCOME | 6,933,966 | 5,627,101 | 1,116,434 | 143,673 | (2,122) | 48,879 | 0 |
| 19 | | | | | | | | |
| 20 | TOTAL RATE BASE | 78,303,366 | 47,030,629 | 15,565,694 | 5,489,375 | 3,572,795 | 3,146,141 | 3,498,734 |
| 21 | | | | | | | | |
| 22 | Spread fire rate base to others | 14 3,498,734 | 2,982,025 | 459,373 | 30,408 | 26,927 | 0 | (3,498,734) |
| 23 | TOTAL 2- Expenses and Taxes | 78,303,366 | 50,012,654 | 16,025,067 | 5,519,783 | 3,599,721 | 3,146,141 | - |
| 24 | | | | | | | | |
| 25 | Implicit Rate of Return (ROR) | 8.86% | 11.96% | 7.17% | 2.62% | -0.06% | 1.55% | 0.00% |
| 26 | OPC Recommended Rate of Return | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% |
| 27 | | | | | | | | |
| 28 | Recommended Operating Income With | | | | | | | |
| 29 | Equalized (OPC) Rates of Return | 7,164,758 | 4,576,158 | 1,466,294 | 505,060 | 329,375 | 287,872 | 0 |
| 30 | | | | | | | | |
| 31 | Class COS at OPC's Recommended Rate of Return | 29,055,242 | 18,119,992 | 5,677,337 | 2,579,895 | 1,245,528 | 1,432,488 | 0 |
| 32 | Revenue Percentage | 100.00% | 62.36% | 19.54% | 8.88% | 4.29% | 4.93% | 0.00% |
| 33 | | | | | | | | |
| 34 | Allocation of Difference Between Current | | | | | | | |
| 35 | Revenue and Recommended Revenue | 25 230,792 | 139,214 | 46,850 | 21,763 | 10,756 | 12,209 | 0 |
| 36 | | | | | | | | |
| 37 | Margin Revenue Required to Equalize | | | | | | | |
| 38 | Class ROR - Revenue Neutral | 28,824,450 | 17,980,778 | 5,630,488 | 2,558,133 | 1,234,772 | 1,420,280 | 0 |
| 39 | Revenue Percentage | 100.00% | 62.38% | 19.53% | 8.87% | 4.28% | 4.93% | 0.00% |
| 40 | | | | | | | | |
| 41 | Rev. Neutral Shift to Equalize Class ROR | - | (1,190,158) | 303,010 | 339,624 | 320,740 | 226,784 | - |
| 42 | Rev. Neutral Shift PERCENTAGE to Equalize Class ROR | | -6.36% | 5.78% | 15.43% | 35.49% | 19.13% | 0.00% |

Schedule RK-2A

BRUNSWICK

CLASS COST OF SERVICE SUMMARY:

| CLASS COST OF SERVICE SUMMARY: | | TOTAL | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | OTHER PUBLIC AUTHORITY | SALES FOR RESALE | FIRE SERVICE |
|--------------------------------|---|-----------|-------------|------------|------------|---------------------------|---------------------|--------------|
| 1 | O & M Expenses | 183,303 | 84,392 | 27,174 | 1,266 | 3,301 | 64,641 | 2,529 |
| 2 | Depreciation Expenses | 34,353 | 14,621 | 4,611 | 235 | 589 | 12,039 | 2,258 |
| 3 | Taxes | 50,604 | 23,439 | 7,538 | 321 | 958 | 16,961 | 1,388 |
| 4 | TOTAL 1 - Expenses and Taxes | 268,260 | 122,452 | 39,324 | 1,822 | 4,847 | 93,641 | 6,175 |
| 5 | | | | | | | | |
| 6 | Spread fire expenses & taxes to others | 14 | 6,175 | 4,706 | 1,275 | 86 | 0 | (6,175) |
| 7 | TOTAL 2- Expenses and Taxes | 268,260 | 127,157 | 40,599 | 1,929 | 4,934 | 93,641 | - |
| 8 | | | | | | | | |
| 9 | Current Revenue (non-gas) | | | | | | | |
| 10 | Rate Revenue (non-gas) | 111,947 | 64,913 | 16,157 | 901 | 2,072 | 25,350 | 2,554 |
| 11 | Other Revenue | 23 | 1,238 | 554 | 181 | 8 | 23 | 441 |
| 12 | TOTAL 1- Current Revenues | 113,185 | 65,467 | 16,338 | 909 | 2,095 | 25,791 | 2,586 |
| 13 | | | | | | | | |
| 14 | Spread fire revenues to others | 14 | 2,586 | 1,971 | 534 | 36 | 0 | (2,586) |
| 15 | TOTAL 2- Current Revenues | 113,185 | 67,437 | 16,872 | 954 | 2,131 | 25,791 | - |
| 16 | Current Revenue Percentage | 100.00% | 59.58% | 14.91% | 0.84% | 1.88% | 22.79% | 0.00% |
| 17 | | | | | | | | |
| 18 | OPERATING INCOME | (155,075) | (59,720) | (23,727) | (975) | (2,803) | (67,850) | 0 |
| 19 | | | | | | | | |
| 20 | TOTAL RATE BASE | 740,756 | 350,220 | 112,341 | 4,673 | 14,280 | 244,279 | 14,963 |
| 21 | | | | | | | | |
| 22 | Spread fire rate base to others | 14 | 14,963 | 11,403 | 3,090 | 209 | 0 | (14,963) |
| 23 | TOTAL 2- Expenses and Taxes | 740,756 | 361,623 | 115,431 | 4,934 | 14,489 | 244,279 | - |
| 24 | | | | | | | | |
| 25 | Implicit Rate of Return (ROR) | -20.93% | -17.05% | -21.12% | -20.87% | -19.63% | -27.78% | 0.00% |
| 26 | OPC Recommended Rate of Return | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% |
| 27 | | | | | | | | |
| 28 | Recommended Operating Income With | | | | | | | |
| 29 | Equalized (OPC) Rates of Return | 67,779 | 33,089 | 10,562 | 451 | 1,326 | 22,351 | 0 |
| 30 | | | | | | | | |
| 31 | Class COS at OPC's Recommended Rate of Return | 336,039 | 160,246 | 51,161 | 2,381 | 6,259 | 115,992 | 0 |
| 32 | Revenue Percentage | 100.00% | 47.69% | 15.22% | 0.71% | 1.86% | 34.52% | 0.00% |
| 33 | | | | | | | | |
| 34 | Allocation of Difference Between Current | | | | | | | |
| 35 | Revenue and Recommended Revenue | 25 | 222,854 | 102,320 | 33,413 | 4,231 | 81,416 | 0 |
| 36 | | | | | | | | |
| 37 | Margin Revenue Required to Equalize | | | | | | | |
| 38 | Class ROR - Revenue Neutral | 113,185 | 57,926 | 17,747 | 907 | 2,028 | 34,576 | 0 |
| 39 | Revenue Percentage | 100.00% | 51.18% | 15.68% | 0.80% | 1.79% | 30.55% | 0.00% |
| 40 | | | | | | | | |
| 41 | Rev. Neutral Shift to Equalize Class ROR | (0) | (9,511) | 876 | (47) | (103) | 8,786 | - |
| 42 | Rev. Neutral Shift PERCENTAGE to Equalize Class ROR | | -14.65% | 5.42% | -5.21% | -4.98% | 34.66% | 0.00% |

JOPLIN

| CLASS COST OF SERVICE SUMMARY: | | TOTAL | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | OTHER PUBLIC AUTHORITY | SALES FOR RESALE | FIRE SERVICE |
|--------------------------------|---|--------------|-------------|------------|------------|---------------------------|---------------------|--------------|
| 1 | O & M Expenses | 3,172,172 | 1,580,949 | 900,004 | 429,920 | 125,457 | 91,897 | 43,945 |
| 2 | Depreciation Expenses | 704,159 | 348,248 | 206,307 | 84,762 | 30,641 | 18,904 | 15,297 |
| 3 | Taxes | 1,160,418 | 567,106 | 359,046 | 130,819 | 53,172 | 29,183 | 21,091 |
| 4 | TOTAL 1 - Expenses and Taxes | 5,036,749 | 2,496,303 | 1,465,358 | 645,501 | 209,270 | 139,984 | 80,334 |
| 5 | | | | | | | | |
| 6 | Spread fire expenses & taxes to others | 14 80,334 | 62,782 | 16,106 | 877 | 568 | 0 | (80,334) |
| 7 | TOTAL 2- Expenses and Taxes | 5,036,749 | 2,559,084 | 1,481,464 | 646,379 | 209,838 | 139,984 | - |
| 8 | | | | | | | | |
| 9 | Current Revenue (non-gas) | | | | | | | |
| 10 | Rate Revenue (non-gas) | 7,243,180 | 3,901,840 | 1,911,022 | 831,755 | 219,055 | 233,736 | 145,772 |
| 11 | Other Revenue | 23 18,435 | 8,815 | 5,595 | 2,358 | 829 | 517 | 322 |
| 12 | TOTAL 1- Current Revenues | 7,261,615 | 3,910,655 | 1,916,617 | 834,113 | 219,884 | 234,253 | 146,094 |
| 13 | | | | | | | | |
| 14 | Spread fire revenues to others | 14 146,094 | 114,175 | 29,291 | 1,596 | 1,033 | 0 | (146,094) |
| 15 | TOTAL 2- Current Revenues | 7,261,615 | 4,024,830 | 1,945,907 | 835,708 | 220,917 | 234,253 | - |
| 16 | Current Revenue Percentage | 100.00% | 55.43% | 26.80% | 11.51% | 3.04% | 3.23% | 0.00% |
| 17 | | | | | | | | |
| 18 | OPERATING INCOME | 2,224,866 | 1,465,745 | 464,443 | 189,330 | 11,079 | 94,269 | 0 |
| 19 | | | | | | | | |
| 20 | TOTAL RATE BASE | 19,353,742 | 9,506,722 | 6,003,419 | 2,112,880 | 889,138 | 473,074 | 368,509 |
| 21 | | | | | | | | |
| 22 | Spread fire rate base to others | 14 368,509 | 287,994 | 73,883 | 4,025 | 2,607 | 0 | (368,509) |
| 23 | TOTAL 2- Expenses and Taxes | 19,353,742 | 9,794,716 | 6,077,302 | 2,116,905 | 891,745 | 473,074 | - |
| 24 | | | | | | | | |
| 25 | Implicit Rate of Return (ROR) | 11.50% | 15.42% | 7.74% | 8.96% | 1.25% | 19.93% | 0.00% |
| 26 | OPC Recommended Rate of Return | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% |
| 27 | | | | | | | | |
| 28 | Recommended Operating Income With | | | | | | | |
| 29 | Equalized (OPC) Rates of Return | 1,770,867 | 896,217 | 556,073 | 193,697 | 81,595 | 43,286 | 0 |
| 30 | | | | | | | | |
| 31 | Class COS at OPC's Recommended Rate of Return | 6,807,616 | 3,455,301 | 2,037,537 | 840,075 | 291,432 | 183,271 | 0 |
| 32 | Revenue Percentage | 100.00% | 50.76% | 29.93% | 12.34% | 4.28% | 2.69% | 0.00% |
| 33 | | | | | | | | |
| 34 | Allocation of Difference Between Current | | | | | | | |
| 35 | Revenue and Recommended Revenue | 25 (453,999) | (220,948) | (140,228) | (59,100) | (20,768) | (12,955) | 0 |
| 36 | | | | | | | | |
| 37 | Margin Revenue Required to Equalize | | | | | | | |
| 38 | Class ROR - Revenue Neutral | 7,261,615 | 3,676,249 | 2,177,765 | 899,175 | 312,200 | 196,225 | 0 |
| 39 | Revenue Percentage | 100.00% | 50.63% | 29.99% | 12.38% | 4.30% | 2.70% | 0.00% |
| 40 | | | | | | | | |
| 41 | Rev. Neutral Shift to Equalize Class ROR | (0) | (348,580) | 231,858 | 63,467 | 91,283 | (38,027) | - |
| 42 | Rev. Neutral Shift PERCENTAGE to Equalize Class ROR | | -8.93% | 12.13% | 7.63% | 41.67% | -16.27% | 0.00% |

MEXICO

CLASS COST OF SERVICE SUMMARY:

| | | TOTAL | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | OTHER PUBLIC AUTHORITY | SALES FOR RESALE | FIRE SERVICE |
|----|---|------------|-------------|------------|------------|---------------------------|---------------------|--------------|
| 1 | O & M Expenses | 1,126,431 | 592,838 | 162,833 | 161,818 | 86,080 | 101,246 | 21,616 |
| 2 | Depreciation Expenses | 182,916 | 93,340 | 26,100 | 23,935 | 14,576 | 14,872 | 10,093 |
| 3 | Taxes | 290,420 | 161,480 | 46,799 | 30,669 | 26,498 | 18,974 | 5,999 |
| 4 | TOTAL 1 - Expenses and Taxes | 1,599,767 | 847,658 | 235,732 | 216,422 | 127,153 | 135,092 | 37,709 |
| 5 | | | | | | | | |
| 6 | Spread fire expenses & taxes to others | 14 37,709 | 31,378 | 5,017 | 529 | 785 | 0 | (37,709) |
| 7 | TOTAL 2- Expenses and Taxes | 1,599,767 | 879,036 | 240,749 | 216,952 | 127,938 | 135,092 | - |
| 8 | | | | | | | | |
| 9 | Current Revenue (non-gas) | | | | | | | |
| 10 | Rate Revenue (non-gas) | 1,537,939 | 827,519 | 202,376 | 254,816 | 97,235 | 118,250 | 37,743 |
| 11 | Other Revenue | 23 11,204 | 5,824 | 1,720 | 1,485 | 978 | 928 | 269 |
| 12 | TOTAL 1- Current Revenues | 1,549,143 | 833,343 | 204,096 | 256,301 | 98,213 | 119,178 | 38,012 |
| 13 | | | | | | | | |
| 14 | Spread fire revenues to others | 14 38,012 | 31,630 | 5,057 | 533 | 791 | 0 | (38,012) |
| 15 | TOTAL 2- Current Revenues | 1,549,143 | 864,974 | 209,152 | 256,834 | 99,005 | 119,178 | - |
| 16 | Current Revenue Percentage | 100.00% | 55.84% | 13.50% | 16.58% | 6.39% | 7.69% | 0.00% |
| 17 | | | | | | | | |
| 18 | OPERATING INCOME | (50,624) | (14,062) | (31,596) | 39,883 | (28,934) | (15,914) | 0 |
| 19 | | | | | | | | |
| 20 | TOTAL RATE BASE | 5,453,254 | 3,104,385 | 895,715 | 536,015 | 506,518 | 329,160 | 81,462 |
| 21 | | | | | | | | |
| 22 | Spread fire rate base to others | 14 81,462 | 67,786 | 10,837 | 1,143 | 1,696 | 0 | (81,462) |
| 23 | TOTAL 2- Expenses and Taxes | 5,453,254 | 3,172,171 | 906,552 | 537,158 | 508,214 | 329,160 | - |
| 24 | | | | | | | | |
| 25 | Implicit Rate of Return (ROR) | -0.93% | -0.45% | -3.53% | 7.44% | -5.71% | -4.83% | 0.00% |
| 26 | OPC Recommended Rate of Return | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% |
| 27 | | | | | | | | |
| 28 | Recommended Operating Income With | | | | | | | |
| 29 | Equalized (OPC) Rates of Return | 498,973 | 290,254 | 82,949 | 49,150 | 46,502 | 30,118 | 0 |
| 30 | | | | | | | | |
| 31 | Class COS at OPC's Recommended Rate of Return | 2,098,740 | 1,169,290 | 323,698 | 266,102 | 174,440 | 165,210 | 0 |
| 32 | Revenue Percentage | 100.00% | 55.71% | 15.42% | 12.68% | 8.31% | 7.87% | 0.00% |
| 33 | | | | | | | | |
| 34 | Allocation of Difference Between Current | | | | | | | |
| 35 | Revenue and Recommended Revenue | 25 549,597 | 292,728 | 86,427 | 74,625 | 49,179 | 46,638 | 0 |
| 36 | | | | | | | | |
| 37 | Margin Revenue Required to Equalize | | | | | | | |
| 38 | Class ROR - Revenue Neutral | 1,549,143 | 876,562 | 237,271 | 191,477 | 125,261 | 118,573 | 0 |
| 39 | Revenue Percentage | 100.00% | 56.58% | 15.32% | 12.36% | 8.09% | 7.65% | 0.00% |
| 40 | | | | | | | | |
| 41 | Rev. Neutral Shift to Equalize Class ROR | 0 | 11,588 | 28,118 | (65,358) | 26,257 | (605) | - |
| 42 | Rev. Neutral Shift PERCENTAGE to Equalize Class ROR | | 1.40% | 13.89% | -25.65% | 27.00% | -0.51% | 0.00% |

PARKVILLE

CLASS COST OF SERVICE SUMMARY:

| | | TOTAL | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | OTHER PUBLIC AUTHORITY | SALES FOR RESALE | FIRE SERVICE |
|----|---|------------|-------------|------------|------------|---------------------------|---------------------|--------------|
| 1 | O & M Expenses | 815,911 | 545,904 | 116,998 | 8,063 | 24,701 | 99,813 | 20,432 |
| 2 | Depreciation Expenses | 155,450 | 97,102 | 20,711 | 1,138 | 4,430 | 13,671 | 18,398 |
| 3 | Taxes | 319,051 | 211,107 | 47,195 | 2,038 | 10,232 | 25,979 | 22,500 |
| 4 | TOTAL 1 - Expenses and Taxes | 1,290,412 | 854,112 | 184,903 | 11,239 | 39,364 | 139,462 | 61,329 |
| 5 | | | | | | | | |
| 6 | Spread fire expenses & taxes to others | 14 61,329 | 54,380 | 5,819 | 506 | 624 | 0 | (61,329) |
| 7 | TOTAL 2- Expenses and Taxes | 1,290,412 | 908,493 | 190,724 | 11,745 | 39,988 | 139,462 | - |
| 8 | | | | | | | | |
| 9 | Current Revenue (non-gas) | | | | | | | |
| 10 | Rate Revenue (non-gas) | 1,392,693 | 1,054,572 | 179,638 | 13,123 | 30,259 | 84,297 | 30,804 |
| 11 | Other Revenue | 23 15,942 | 10,364 | 2,356 | 124 | 513 | 1,628 | 957 |
| 12 | TOTAL 1- Current Revenues | 1,408,635 | 1,064,936 | 181,994 | 13,247 | 30,772 | 85,925 | 31,761 |
| 13 | | | | | | | | |
| 14 | Spread fire revenues to others | 14 31,761 | 28,162 | 3,014 | 262 | 323 | 0 | (31,761) |
| 15 | TOTAL 2- Current Revenues | 1,408,635 | 1,093,098 | 185,007 | 13,509 | 31,095 | 85,925 | - |
| 16 | Current Revenue Percentage | 100.00% | 77.60% | 13.13% | 0.96% | 2.21% | 6.10% | 0.00% |
| 17 | | | | | | | | |
| 18 | OPERATING INCOME | 118,223 | 184,606 | (5,717) | 1,764 | (8,893) | (53,537) | 0 |
| 19 | | | | | | | | |
| 20 | TOTAL RATE BASE | 3,803,765 | 2,576,058 | 574,910 | 22,023 | 124,576 | 275,111 | 231,089 |
| 21 | | | | | | | | |
| 22 | Spread fire rate base to others | 14 231,089 | 204,906 | 21,926 | 1,907 | 2,351 | 0 | (231,089) |
| 23 | TOTAL 2- Expenses and Taxes | 3,803,765 | 2,780,963 | 596,836 | 23,930 | 126,928 | 275,111 | - |
| 24 | | | | | | | | |
| 25 | Implicit Rate of Return (ROR) | 3.11% | 7.17% | -0.99% | 8.01% | -7.14% | -19.46% | 0.00% |
| 26 | OPC Recommended Rate of Return | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% |
| 27 | | | | | | | | |
| 28 | Recommended Operating Income With | | | | | | | |
| 29 | Equalized (OPC) Rates of Return | 348,045 | 254,458 | 54,610 | 2,190 | 11,614 | 25,173 | 0 |
| 30 | | | | | | | | |
| 31 | Class COS at OPC's Recommended Rate of Return | 1,638,457 | 1,162,951 | 245,334 | 13,935 | 51,602 | 164,635 | 0 |
| 32 | Revenue Percentage | 100.00% | 70.98% | 14.97% | 0.85% | 3.15% | 10.05% | 0.00% |
| 33 | | | | | | | | |
| 34 | Allocation of Difference Between Current | | | | | | | |
| 35 | Revenue and Recommended Revenue | 25 229,822 | 158,949 | 36,129 | 1,908 | 7,862 | 24,973 | 0 |
| 36 | | | | | | | | |
| 37 | Margin Revenue Required to Equalize | | | | | | | |
| 38 | Class ROR - Revenue Neutral | 1,408,635 | 1,004,001 | 209,205 | 12,027 | 43,740 | 139,661 | 0 |
| 39 | Revenue Percentage | 100.00% | 71.27% | 14.85% | 0.85% | 3.11% | 9.91% | 0.00% |
| 40 | | | | | | | | |
| 41 | Rev. Neutral Shift to Equalize Class ROR | 0 | (89,097) | 24,198 | (1,482) | 12,645 | 53,736 | - |
| 42 | Rev. Neutral Shift PERCENTAGE to Equalize Class ROR | | -8.45% | 13.47% | -11.29% | 41.79% | 63.75% | 0.00% |

ST. CHARLES

CLASS COST OF SERVICE SUMMARY:

| | | TOTAL | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | OTHER PUBLIC AUTHORITY | SALES FOR RESALE | FIRE SERVICE |
|----|---|--------------|-------------|------------|------------|---------------------------|---------------------|--------------|
| 1 | O & M Expenses | 3,487,654 | 3,117,254 | 251,725 | 0 | 44,565 | 0 | 74,109 |
| 2 | Depreciation Expenses | 735,656 | 593,391 | 53,668 | 0 | 10,824 | 0 | 77,773 |
| 3 | Taxes | 1,462,692 | 1,259,674 | 108,338 | 0 | 20,975 | 0 | 73,705 |
| 4 | TOTAL 1 - Expenses and Taxes | 5,686,002 | 4,970,319 | 413,731 | - | 76,364 | - | 225,588 |
| 5 | | | | | | | | |
| 6 | Spread fire expenses & taxes to others | 14 225,588 | 214,590 | 10,511 | 0 | 487 | 0 | (225,588) |
| 7 | TOTAL 2- Expenses and Taxes | 5,686,002 | 5,184,909 | 424,242 | - | 76,851 | - | - |
| 8 | | | | | | | | |
| 9 | Current Revenue (non-gas) | | | | | | | |
| 10 | Rate Revenue (non-gas) | 7,125,323 | 6,232,416 | 757,255 | 0 | 95,379 | 0 | 40,273 |
| 11 | Other Revenue | 23 65,416 | 56,448 | 4,863 | 0 | 935 | 0 | 3,171 |
| 12 | TOTAL 1- Current Revenues | 7,190,739 | 6,288,864 | 762,118 | 0 | 96,314 | 0 | 43,444 |
| 13 | | | | | | | | |
| 14 | Spread fire revenues to others | 14 43,444 | 41,326 | 2,024 | 0 | 94 | 0 | (43,444) |
| 15 | TOTAL 2- Current Revenues | 7,190,739 | 6,330,189 | 764,142 | - | 96,408 | - | - |
| 16 | Current Revenue Percentage | 100.00% | 88.03% | 10.63% | 0.00% | 1.34% | 0.00% | 0.00% |
| 17 | | | | | | | | |
| 18 | OPERATING INCOME | 1,504,737 | 1,145,280 | 339,900 | 0 | 19,557 | 0 | 0 |
| 19 | | | | | | | | |
| 20 | TOTAL RATE BASE | 23,964,383 | 20,769,287 | 1,785,668 | - | 346,047 | - | 1,063,380 |
| 21 | | | | | | | | |
| 22 | Spread fire rate base to others | 14 1,063,380 | 1,011,537 | 49,546 | 0 | 2,297 | 0 | (1,063,380) |
| 23 | TOTAL 2- Expenses and Taxes | 23,964,383 | 21,780,824 | 1,835,214 | - | 348,344 | - | - |
| 24 | | | | | | | | |
| 25 | Implicit Rate of Return (ROR) | 6.28% | 5.51% | 19.03% | | 5.65% | | 0.00% |
| 26 | OPC Recommended Rate of Return | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% |
| 27 | | | | | | | | |
| 28 | Recommended Operating Income With | | | | | | | |
| 29 | Equalized (OPC) Rates of Return | 2,192,741 | 1,992,945 | 167,922 | 0 | 31,873 | 0 | 0 |
| 30 | | | | | | | | |
| 31 | Class COS at OPC's Recommended Rate of Return | 7,878,743 | 7,177,854 | 592,164 | 0 | 108,725 | 0 | 0 |
| 32 | Revenue Percentage | 100.00% | 91.10% | 7.52% | 0.00% | 1.38% | 0.00% | 0.00% |
| 33 | | | | | | | | |
| 34 | Allocation of Difference Between Current | | | | | | | |
| 35 | Revenue and Recommended Revenue | 25 688,004 | 623,921 | 53,749 | 0 | 10,334 | 0 | 0 |
| 36 | | | | | | | | |
| 37 | Margin Revenue Required to Equalize | | | | | | | |
| 38 | Class ROR - Revenue Neutral | 7,190,739 | 6,553,933 | 538,415 | 0 | 98,391 | 0 | 0 |
| 39 | Revenue Percentage | 100.00% | 91.14% | 7.49% | 0.00% | 1.37% | 0.00% | 0.00% |
| 40 | | | | | | | | |
| 41 | Rev. Neutral Shift to Equalize Class ROR | (0) | 223,744 | (225,727) | - | 1,983 | - | - |
| 42 | Rev. Neutral Shift PERCENTAGE to Equalize Class ROR | | 3.59% | -29.81% | | 2.08% | | 0.00% |

ST. JOSEPH

| CLASS COST OF SERVICE SUMMARY: | | TOTAL | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | OTHER PUBLIC AUTHORITY | SALES FOR RESALE | FIRE SERVICE |
|--------------------------------|---|--------------|-------------|------------|------------|---------------------------|---------------------|--------------|
| 1 | O & M Expenses | 4,680,670 | 2,344,437 | 912,604 | 689,326 | 149,728 | 463,317 | 121,257 |
| 2 | Depreciation Expenses | 810,955 | 382,557 | 156,341 | 103,566 | 26,984 | 71,163 | 70,344 |
| 3 | Taxes | 1,246,518 | 599,689 | 256,292 | 155,896 | 44,219 | 107,720 | 82,702 |
| 4 | TOTAL 1 - Expenses and Taxes | 6,738,143 | 3,326,683 | 1,325,237 | 948,788 | 220,931 | 642,200 | 274,303 |
| 5 | | | | | | | | |
| 6 | Spread fire expenses & taxes to others | 14 274,303 | 228,910 | 40,030 | 3,553 | 1,810 | 0 | (274,303) |
| 7 | TOTAL 2- Expenses and Taxes | 6,738,143 | 3,555,593 | 1,365,267 | 952,341 | 222,741 | 642,200 | - |
| 8 | | | | | | | | |
| 9 | Current Revenue (non-gas) | | | | | | | |
| 10 | Rate Revenue (non-gas) | 9,457,726 | 5,573,359 | 1,794,874 | 1,019,804 | 264,074 | 645,071 | 160,544 |
| 11 | Other Revenue | 23 20,690 | 9,796 | 4,187 | 2,927 | 722 | 1,999 | 1,059 |
| 12 | TOTAL 1- Current Revenues | 9,478,416 | 5,583,155 | 1,799,061 | 1,022,731 | 264,796 | 647,070 | 161,603 |
| 13 | | | | | | | | |
| 14 | Spread fire revenues to others | 14 161,603 | 134,860 | 23,584 | 2,093 | 1,066 | 0 | (161,603) |
| 15 | TOTAL 2- Current Revenues | 9,478,416 | 5,718,015 | 1,822,644 | 1,024,824 | 265,863 | 647,070 | - |
| 16 | Current Revenue Percentage | 100.00% | 60.33% | 19.23% | 10.81% | 2.80% | 6.83% | 0.00% |
| 17 | | | | | | | | |
| 18 | OPERATING INCOME | 2,740,273 | 2,162,422 | 457,377 | 72,483 | 43,122 | 4,869 | 0 |
| 19 | | | | | | | | |
| 20 | TOTAL RATE BASE | 20,504,125 | 9,932,135 | 4,233,523 | 2,460,427 | 730,431 | 1,704,277 | 1,443,331 |
| 21 | | | | | | | | |
| 22 | Spread fire rate base to others | 14 1,443,331 | 1,204,480 | 210,633 | 18,696 | 9,523 | 0 | (1,443,331) |
| 23 | TOTAL 2- Expenses and Taxes | 20,504,125 | 11,136,614 | 4,444,156 | 2,479,123 | 739,954 | 1,704,277 | - |
| 24 | | | | | | | | |
| 25 | Implicit Rate of Return (ROR) | 13.36% | 21.77% | 10.80% | 2.95% | 5.90% | 0.29% | 0.00% |
| 26 | OPC Recommended Rate of Return | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% |
| 27 | | | | | | | | |
| 28 | Recommended Operating Income With | | | | | | | |
| 29 | Equalized (OPC) Rates of Return | 1,876,127 | 1,019,000 | 406,640 | 226,840 | 67,706 | 155,941 | 0 |
| 30 | | | | | | | | |
| 31 | Class COS at OPC's Recommended Rate of Return | 8,614,270 | 4,574,594 | 1,771,907 | 1,179,181 | 290,447 | 798,142 | 0 |
| 32 | Revenue Percentage | 100.00% | 53.10% | 20.57% | 13.69% | 3.37% | 9.27% | 0.00% |
| 33 | | | | | | | | |
| 34 | Allocation of Difference Between Current | | | | | | | |
| 35 | Revenue and Recommended Revenue | 25 (864,146) | (431,232) | (184,295) | (128,832) | (31,798) | (87,989) | 0 |
| 36 | | | | | | | | |
| 37 | Margin Revenue Required to Equalize | | | | | | | |
| 38 | Class ROR - Revenue Neutral | 9,478,416 | 5,005,825 | 1,956,203 | 1,308,013 | 322,245 | 886,130 | 0 |
| 39 | Revenue Percentage | 100.00% | 52.81% | 20.64% | 13.80% | 3.40% | 9.35% | 0.00% |
| 40 | | | | | | | | |
| 41 | Rev. Neutral Shift to Equalize Class ROR | (0) | (712,190) | 133,559 | 283,189 | 56,382 | 239,061 | - |
| 42 | Rev. Neutral Shift PERCENTAGE to Equalize Class ROR | | -12.78% | 7.44% | 27.77% | 21.35% | 37.06% | 0.00% |

WARRENSBURG

| CLASS COST OF SERVICE SUMMARY: | | TOTAL | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | OTHER PUBLIC AUTHORITY | SALES FOR RESALE | FIRE SERVICE | |
|--------------------------------|---|-----------|-------------|------------|------------|---------------------------|---------------------|--------------|-----------|
| 1 | O & M Expenses | 834,099 | 489,134 | 121,418 | 29,540 | 129,456 | 43,847 | 20,703 | |
| 2 | Depreciation Expenses | 165,378 | 88,644 | 23,458 | 5,232 | 25,759 | 7,672 | 14,613 | |
| 3 | Taxes | 236,209 | 131,298 | 35,352 | 6,737 | 41,547 | 10,170 | 11,104 | |
| 4 | TOTAL 1 - Expenses and Taxes | 1,235,686 | 709,076 | 180,228 | 41,509 | 196,762 | 61,690 | 46,421 | |
| 5 | | | | | | | | | |
| 6 | Spread fire expenses & taxes to others | 14 | 46,421 | 38,369 | 6,601 | 319 | 1,131 | 0 | (46,421) |
| 7 | TOTAL 2- Expenses and Taxes | 1,235,686 | 747,445 | 186,830 | 41,828 | 197,894 | 61,690 | - | |
| 8 | | | | | | | | | |
| 9 | Current Revenue (non-gas) | | | | | | | | |
| 10 | Rate Revenue (non-gas) | 1,802,615 | 1,047,682 | 377,811 | 80,396 | 195,686 | 79,029 | 22,011 | |
| 11 | Other Revenue | 23 | 20,101 | 10,974 | 2,978 | 672 | 3,543 | 1,017 | 917 |
| 12 | TOTAL 1- Current Revenues | 1,822,716 | 1,058,656 | 380,789 | 81,068 | 199,229 | 80,046 | 22,928 | |
| 13 | | | | | | | | | |
| 14 | Spread fire revenues to others | 14 | 22,928 | 18,951 | 3,260 | 158 | 559 | 0 | (22,928) |
| 15 | TOTAL 2- Current Revenues | 1,822,716 | 1,077,607 | 384,050 | 81,226 | 199,788 | 80,046 | - | |
| 16 | Current Revenue Percentage | 100.00% | 59.12% | 21.07% | 4.46% | 10.96% | 4.39% | 0.00% | |
| 17 | | | | | | | | | |
| 18 | OPERATING INCOME | 587,030 | 330,162 | 197,220 | 39,398 | 1,894 | 18,356 | 0 | |
| 19 | | | | | | | | | |
| 20 | TOTAL RATE BASE | 4,130,235 | 2,345,485 | 628,901 | 106,394 | 733,151 | 158,854 | 157,451 | |
| 21 | | | | | | | | | |
| 22 | Spread fire rate base to others | 14 | 157,451 | 130,141 | 22,391 | 1,083 | 3,836 | 0 | (157,451) |
| 23 | TOTAL 2- Expenses and Taxes | 4,130,235 | 2,475,626 | 651,291 | 107,477 | 736,987 | 158,854 | - | |
| 24 | | | | | | | | | |
| 25 | Implicit Rate of Return (ROR) | 14.21% | 14.08% | 31.36% | 37.03% | 0.26% | 11.56% | 0.00% | |
| 26 | OPC Recommended Rate of Return | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | 9.15% | |
| 27 | | | | | | | | | |
| 28 | Recommended Operating Income With | | | | | | | | |
| 29 | Equalized (OPC) Rates of Return | 377,916 | 226,520 | 59,593 | 9,834 | 67,434 | 14,535 | 0 | |
| 30 | | | | | | | | | |
| 31 | Class COS at OPC's Recommended Rate of Return | 1,613,602 | 973,965 | 246,423 | 51,662 | 265,328 | 76,225 | 0 | |
| 32 | Revenue Percentage | 100.00% | 60.36% | 15.27% | 3.20% | 16.44% | 4.72% | 0.00% | |
| 33 | | | | | | | | | |
| 34 | Allocation of Difference Between Current | | | | | | | | |
| 35 | Revenue and Recommended Revenue | 25 | (209,114) | (119,619) | (32,465) | (7,324) | (38,622) | (11,083) | 0 |
| 36 | | | | | | | | | |
| 37 | Margin Revenue Required to Equalize | | | | | | | | |
| 38 | Class ROR - Revenue Neutral | 1,822,716 | 1,093,584 | 278,888 | 58,986 | 303,950 | 87,308 | 0 | |
| 39 | Revenue Percentage | 100.00% | 60.00% | 15.30% | 3.24% | 16.68% | 4.79% | 0.00% | |
| 40 | | | | | | | | | |
| 41 | Rev. Neutral Shift to Equalize Class ROR | 0 | 15,978 | (105,162) | (22,240) | 104,162 | 7,262 | - | |
| 42 | Rev. Neutral Shift PERCENTAGE to Equalize Class ROR | | 1.53% | -27.83% | -27.66% | 53.23% | 9.19% | 0.00% | |

Office of Public Counsel
Rate Design Proposal Reflecting Combined First Year Impact District Caps and Inter-Class Revenue Shifts
for Missouri-American Water Company
Case No. WR-2000-281

Step1: Calculate Percent of Cost of Service by District by Class

| District | Residential | Commercial | Industrial | OPA | Resale | Private Fire |
|-------------|-------------|------------|------------|--------|--------|--------------|
| Brunswick | 44.12% | 11.49% | 0.86% | 1.82% | 41.12% | 0.60% |
| Joplin | 51.96% | 24.52% | 13.37% | 3.44% | 5.16% | 1.55% |
| Mexico | 42.36% | 13.29% | 23.63% | 6.77% | 12.89% | 1.06% |
| Parkville | 68.10% | 15.65% | 0.73% | 3.64% | 10.76% | 1.13% |
| St. Charles | 85.90% | 10.84% | 0.06% | 2.23% | 0.00% | 0.96% |
| St. Joseph | 41.89% | 18.80% | 21.19% | 3.52% | 14.00% | 0.60% |
| Warrensburg | 50.49% | 19.63% | 5.71% | 14.62% | 8.52% | 1.03% |
| Total | 55.02% | 17.56% | 13.28% | 4.08% | 9.13% | 0.93% |

Step2: Calculate Previous Year's Percent of Revenue by District by Class

| District | Residential | Commercial | Industrial | OPA | Resale | Private Fire |
|-------------|-------------|------------|------------|--------|--------|--------------|
| Brunswick | 57.79% | 14.05% | 0.96% | 1.90% | 23.02% | 2.28% |
| Joplin | 55.40% | 25.55% | 10.35% | 3.10% | 3.51% | 2.10% |
| Mexico | 51.75% | 15.15% | 16.51% | 6.49% | 7.57% | 2.54% |
| Parkville | 73.44% | 14.64% | 0.76% | 2.93% | 5.85% | 2.38% |
| St. Charles | 86.55% | 10.75% | 0.07% | 1.93% | 0.00% | 0.71% |
| St. Joseph | 56.95% | 19.40% | 12.08% | 2.94% | 6.80% | 1.83% |
| Warrensburg | 56.69% | 21.02% | 4.60% | 12.02% | 4.27% | 1.42% |
| Total | 64.48% | 18.40% | 7.81% | 3.48% | 4.18% | 1.66% |

Step3: Calculate Adjustment Percent to District by Class (equals half the difference of cost and revenue percentages)

| District | Residential | Commercial | Industrial | OPA | Resale | Private Fire |
|-------------|-------------|------------|------------|--------|--------|--------------|
| Brunswick | -6.84% | -1.28% | -0.05% | -0.04% | 9.05% | -0.84% |
| Joplin | -1.72% | -0.52% | 1.51% | 0.17% | 0.82% | -0.27% |
| Mexico | -4.70% | -0.93% | 3.56% | 0.14% | 2.66% | -0.74% |
| Parkville | -2.67% | 0.51% | -0.02% | 0.35% | 2.45% | -0.63% |
| St. Charles | -0.32% | 0.05% | 0.00% | 0.15% | 0.00% | 0.13% |
| St. Joseph | -7.53% | -0.30% | 4.55% | 0.29% | 3.60% | -0.61% |
| Warrensburg | -3.10% | -0.69% | 0.55% | 1.30% | 2.13% | -0.19% |
| Total | -4.73% | -0.42% | 2.74% | 0.30% | 2.48% | -0.36% |

Step4: Combined First Year Adjustment Increase of Revenue to be Collected by District by Class
(assuming 15% District phase in, and 10% increase to Joplin)

| District | Residential | Commercial | Industrial | OPA | Resale | Private Fire |
|-------------|-------------|------------|------------|-----|--------|--------------|
| Brunswick | 8.16% | 14% | 15% | 15% | 24% | 14% |
| Joplin | 8% | 9% | 12% | 10% | 11% | 10% |
| Mexico | 10% | 14% | 19% | 15% | 18% | 14% |
| Parkville | 12% | 16% | 15% | 15% | 17% | 14% |
| St. Charles | 15% | 15% | 15% | 15% | 15% | 15% |
| St. Joseph | 7% | 15% | 20% | 15% | 19% | 14% |
| Warrensburg | 12% | 14% | 16% | 16% | 17% | 15% |

Step5: Compute Year 1 Recovery

| District | Total | Residential | Commercial | Industrial | OPA | Resale | Private Fire |
|-------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|
| Brunswick | \$ 126,554 | 70,044.99 | 17,900.72 | 1,241.45 | 2,445.19 | 32,006.15 | 2,915.70 |
| Joplin | \$ 7,847,972 | 4,315,158.57 | 2,011,819.38 | 830,134.47 | 245,317.68 | 280,026.69 | 165,515.60 |
| Mexico | \$ 1,729,833 | 872,238.35 | 264,064.48 | 299,071.94 | 114,098.15 | 136,079.26 | 44,280.76 |
| Parkville | \$ 1,632,854 | 1,189,372.67 | 243,739.50 | 12,574.69 | 48,755.46 | 99,114.04 | 39,297.98 |
| St. Charles | \$ 8,230,208 | 7,119,895.58 | 887,057.08 | 5,412.94 | 159,495.08 | - | 58,347.70 |
| St. Joseph | \$ 10,615,560 | 5,829,958.51 | 2,119,876.03 | 1,376,107.20 | 322,526.98 | 767,884.75 | 199,206.56 |
| Warrensburg | \$ 2,050,533 | 1,147,334.22 | 434,499.57 | 96,142.19 | 252,755.05 | 90,399.16 | 29,402.84 |
| | 32,233,515.32 | 20,544,002.90 | 5,978,956.76 | 2,620,684.88 | 1,145,393.58 | 1,405,510.05 | 538,967.15 |

* Additional years revenue impacts can be calculated in a similar manner.

* Inter-class shifts are applied until full phase in is achieved