Exhibit No.
Witness: Michael Gorman
Type of Exhibit: Surrebuttal Testimony
Sponsoring Party: MIEC
Subjects: Cost of Service and Rate Design
Date: November 10, 2003

BEFORE THE

PUBLIC SERVICE COMMISSION OF MISSOURI

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

Surrebuttal Testimony and Schedule of

Michael Gorman

On behalf of

Missouri Industrial Energy Consumers

November 10, 2003
Project 8027

BRUBAKER & ASSOCIATES, INC.
ST. LOUIS, MO 63141-2000

Ex 59

Exhibit No. 59
Date _____ Case No. WR-2003-0500
Reporter

BEFORE THE

PUBLIC SERVICE COMMISSION OF MISSOURI

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

Surrebuttal Testimony of Michael Gorman

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A My name is Michael Gorman and my business address is 1215 Fern Ridge Parkway, Suite 208, St. Louis, MO 63141-2000.

Q HAVE YOU PREVIOUSLY OFFERED REBUTTAL TESTIMONY IN THIS PROCEEDING ON BEHALF OF THE MISSOURI INDUSTRIAL ENERGY CONSUMERS (MIEC)?

A Yes, I have.

Q WHAT IS THE SUBJECT OF YOUR SURREBUTTAL TESTIMONY?

A I will comment upon the direct testimony and exhibits offered by Mr. Wendell R. Hubbs of the Missouri Public Service Commission (Commission) Staff and the direct testimony and exhibits offered by Ms. Barbara Meisenheimer and Mr. James Busch on behalf of the Office of Public Counsel (OPC). I strongly disagree with the elements of the cost of service study and rate design for the St. Louis County District offered by Mr. Hubbs and the development of certain allocation factors by Ms. Meisenheimer and their application in the cost of service study prepared by Mr. Busch for the St. Louis County District.

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PUBLIC SERVICE COMMISSION OF MISSOURI

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

Affidavit of Michael Gorman

STATE OF MISSOURI)
) **SS**
COUNTY OF ST. LOUIS)

Michael Gorman, being first duly sworn, on his oath states:

1. My name is Michael Gorman. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 1215 Fern Ridge Parkway, Suite 208, St. Louis, MO 63141-2000. We have been retained by the Missouri Industrial Energy Consumers in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony and schedule which were prepared in written form for introduction into evidence in the WR-2003-0500 Proceeding.

3. I hereby swear and affirm that the surrebuttal testimony and schedule are true and correct and show the matters and things they purport to show.

Michael Gorman

Subscribed and sworn before this 10th day of November, 2003.

CAROL SCHULZ
Notary Public - Notary Seal
STATE OF MISSOURI
St. Louis County
My Commission Expires: Feb. 26, 2004

Notary Public

My Commission expires on February 26, 2004.

Q PLEASE SUMMARIZE YOUR SURREBUTTAL TESTIMONY.

A My surrebuttal testimony may be summarized as follows:

1. In contrast to cost of service studies offered by the Missouri-American Water Company (MAWC or Company) and myself, Mr. Hubbs' study fails to remove the majority of distribution mains-related costs from the costs allocated to Rate B (wholesale) and Rate J (industrial) customers. This failure not only serves to over-allocate costs to these classes, it is also a sharp departure from the Commission's practice for setting water rates for St. Louis County in the Company's past rate cases.

2. Mr. Hubbs recommends that the costs of Public Fire Protection Service be recovered in the volumetric charges for each customer class. However, such costs are fixed in nature and do not vary with the volume of water consumed. Thus high volume customers would be overcharged for this service. Moreover, Private Fire customers would be charged twice for this service, and Wholesale customers would pay for a service that they provide for themselves under Mr. Hubbs' proposal. The Commission should accept the Company's proposed Public Fire Protection Rate design on a per customer basis and reject the recommendation put forth by Mr. Hubbs.

3. Ms. Meisenheimer presents theoretical discussions of economies of scope and economies of scale as factors to consider when allocating the operating and capital costs of a water utility. However, there is no connection between these theories and her development of what she terms a "capacity allocation factor." Therefore, the theoretical portion of her testimony is irrelevant to this case.

4. Instead of attempting to support her theories, Ms. Meisenheimer arbitrarily recommends a capacity factor calculated with the square root of the ratios for the base load and peak load allocators of the various customer classes. This capacity factor has no apparent basis in the record presented thus far in this case, nor is it based on any engineering study. Thus, the Commission cannot rely upon any cost of service that utilizes Ms. Meisenheimer's arbitrary capacity factor calculations.

5. The class cost of service study presented by Mr. Busch is flawed by its reliance upon Ms. Meisenheimer's class capacity factor theory; Mr. Busch also applies an improper classification factor to source of supply plant and expenses. The Commission should reject Mr. Busch's cost study as a basis for assigning class cost responsibility and the design of rates to recover those costs in this case. Instead, it should utilize the cost of service study model presented by MIEC.

Mr. Hubbs' Testimony

Q PLEASE COMPARE THE ALLOCATION OF TRANSMISSION AND DISTRIBUTION COSTS OF MAINS TO CUSTOMER CLASSES IN YOUR COST STUDY FOR THE ST. LOUIS COUNTY DISTRICT (AND THAT OF MAWC) TO MR. HUBBS' STUDY.

A The class cost of service studies offered by the Company and by me in my Direct Testimony isolate the costs associated with large diameter (12 inches and greater) bulk transmission mains on the one hand, and smaller diameter (10 inches and less) distribution mains on the other. While the Company study and my study allocate total transmission costs of mains to all classes, they spread only a portion of the distribution mains-related costs to Rate B (wholesale) and Rate J (industrial) customer classes. Mr. Hubbs, in contrast, makes no such distinction in his study, and as a result these customer classes share fully in the allocation of costs of the entire distribution system, including those facilities they do not and cannot use.

Q DID MR. HUBBS OFFER A RATIONALE FOR HIS FAILURE TO MAKE A DISTINCTION BETWEEN TRANSMISSION AND DISTRIBUTION COSTS IN HIS TESTIMONY?

A No, he did not. His testimony is completely silent on this point.

Q WHY IS IT IMPORTANT TO DISTINGUISH THE SIZE OF THE MAINS IN ALLOCATING COSTS BETWEEN CUSTOMER CLASSES?

A This is important in properly assigning the costs MAWC incurs to provide each customer with water service. The simple fact of the matter is that MAWC does not incur costs of small mains to serve large customers. This is illustrated on my Schedule 1.

This schedule shows a diagram of a simple hypothetical water utility system. As shown on this diagram, certain customers tap onto large transmission mains because of the volume of water taken each day from the utility. These larger customers cannot be served from smaller pipes because the smaller pipes cannot supply the water volume usage. *In significant contrast, a water utility would step down the size of its pipe in its* distribution system to serve the customers than use a smaller volume of water. These smaller customers are connected to a smaller pipe distribution network that minimizes its cost to deliver water to smaller customers.

This diagram illustrates that water utilities do not make investments in small pipes in order to serve large customers. Rather, water utilities invest in small distribution pipes to economically serve smaller usage customers.

It is important to assign the cost of these smaller pipes to the customers for which these pipe investments are made.

Q DO YOU BELIEVE IT IS APPROPRIATE TO ALLOCATE A SMALLER SHARE OF DISTRIBUTION-RELATED COSTS TO LARGE INDUSTRIAL AND WHOLESALE CUSTOMERS IN THE ST. LOUIS COUNTY DISTRICT?

A Yes, I do. The St. Louis County District serves a significant industrial and wholesale load. These customers necessarily take the bulk of their water through larger diameter mains, as I stated above. The volumes of water they use cannot be adequately provided, for example, through four-inch or six-inch diameter distribution mains. The smaller diameter mains are dedicated mostly to serving residential and commercial accounts that do not consume large volumes of water. Since industrial and wholesale customers do not require the grid of smaller mains for water service, it is unreasonable and unfair to make them pay the operating and capital costs associated with them.

Q HAS THE COMMISSION SET RATES FOR THE ST. LOUIS COUNTY DISTRICT IN PAST RATE CASES THAT RECOGNIZE THE COST CAUSATIVE FACTORS YOU JUST OUTLINED?

A Yes, numerous times, most recently in Case No. WR-2000-844. Thus, my cost of service study and that of the Company are both consistent with past Commission practice in this regard, while Mr. Hubbs' study is not.

Q CAN YOU CITE ANY ADDITIONAL AUTHORITY FOR DISTINGUISHING BETWEEN TRANSMISSION AND DISTRIBUTION COSTS OF MAINS IN THE PREPARATION OF A COST OF SERVICE STUDY?

A Yes, I can. A thorough discussion of cost of service practices is presented in *Principles of Water Rates, Fees, and Charges*, Manual M1, published by the American Water Works Association in 2000. Chapter 8 of that Manual discusses the allocation of costs to customer classes. On Page 63, it states that a utility may consider service characteristics and demand patterns in establishing customer classes. In particular, utilities may recognize that large volume industrial customers, wholesale customers and other large users tend to be served directly from major treated water transmission mains, while smaller users are served by both large and small mains.

Q PLEASE SUMMARIZE YOUR DISCUSSION OF MR. HUBBS' COST OF SERVICE STUDY FOR THE ST. LOUIS COUNTY DISTRICT.

A Mr. Hubbs' study for the St. Louis County District over-allocates costs to industrial and wholesale customers. It is also inconsistent with Commission precedents for water rate design in St. Louis County, and it ignores common cost allocation practice in the

industry. The Commission should reject Mr. Hubbs' study as a basis for apportioning costs among customer classes in St. Louis County. Instead, it should utilize the allocation methods discussed in my direct testimony.

Q TURNING TO THE ISSUE OF RATE DESIGN, PLEASE DISCUSS MR. HUBBS' PROPOSAL FOR THE RECOVERY OF PUBLIC FIRE PROTECTION COSTS.

A On Page 7 of his direct testimony, Mr. Hubbs recommends that St. Louis County's charge for public fire protection be recovered in the commodity charge for each customer class rather than from a separate charge for each customer. He claims this would make the recovery of the *private* [emphasis added] fire protection costs consistent with the other operating districts and be more equitable based on use.

Q DO YOU AGREE WITH MR. HUBBS' PROPOSAL?

A Not at all. First, it is not clear from Mr. Hubbs' testimony whether he recognizes the distinction between *public* and *private* fire protection costs. Private fire protection costs refer to the costs of providing capacity to fight fires in individual structures and premises, and they are recovered in the rates paid by the owners of these premises. In many cases, a separate main is installed and dedicated for this specific purpose. In St. Louis County, the Rate E tariff recovers these costs. Public fire protection costs, by contrast, refer to the pumping and mains capacity and hydrants throughout the system required to fight fires. All customers benefit from these costs, and they are recovered through a specific line item on each customer's bill for water service.

Second, the overwhelming majority of fire protection costs are fixed in nature. The utility must provide sufficient supply, treatment, transmission, distribution and storage *capacity* to fight fires. The costs of capacity to fight fires do not vary with the

volume of water consumed for domestic, commercial or industrial purposes. Because capacity costs do not vary with consumption volume, they are best recovered through a fixed charge, as is the current practice.

Third, Mr. Hubbs' proposal would force private fire protection customers to pay *too much for this service. It ignores the fact that private fire protection reduces the* potential demands on public fire protection service, and it fails to recognize that larger users are the most likely to pay for private fire protection through graduated charges for larger fire service lines. Moreover, Wholesale customers, who provide their own hydrants and storage capacity, would be charged for the costs of public fire protection in the St. Louis County retail service area. This is simply unfair. For these reasons, the Commission should reject Mr. Hubbs' proposal.

Ms. Meisenheimer's Testimony

Q PLEASE COMMENT ON MS. MEISENHEIMER'S DISCUSSION OF ECONOMIES OF SCOPE.

A As defined by Ms. Meisenheimer, "economies of scope" is characterized by a situation where a single entity is the producer of multiple products or services that could otherwise have been produced by stand-alone entities. The entity enjoys economies of scope if its total cost of production is less than the sum of the cost of providing each of these products or services on a totally stand-alone basis. Ms. Meisenheimer cites the Company's use of its investment in mains to provide water to all customer classes as opposed to serving each class through separate facilities, as an example of "economies of scope." However, she did not cite economies of scope as a factor that might have influenced the Company's investment in any other part of its operations, such as supply and treatment.

Q DID MS. MEISENHEIMER CALCULATE THE STAND-ALONE COST TO PROVIDE WATER SERVICE TO EACH OF THE COMPANY'S CUSTOMER CLASSES?

A No, she did not provide such a calculation for the St. Louis County District or for any other District of the Company.

Q IS THERE ANYTHING TO BE GAINED FROM CALCULATING THE HYPOTHETICAL STAND-ALONE COST OF PROVIDING VARIOUS TYPES OF WATER SERVICE TO THE COMPANY'S CUSTOMER CLASSES?

A No, there is not. The fabrication of an indefinite number of "stand-alone" entities simply shows that someone can imagine a supply, treatment and delivery configuration that would be less efficient and would therefore cost more to provide the same level of services than does the existing configuration. One could imagine any number of such stand-alone systems and their associated costs. Ms Meisenheimer does admit that "...a judgment is required ...", at Page 4 of her testimony, but she provides no guidelines for planning such imaginary systems, nor does she provide any standard for judging one system to be more plausible than another.

As a result, it is simply impossible to determine either a "stand-alone" cost or an "incremental" cost for a customer class that she calls for in her testimony. Furthermore, in this case, we are not allocating either stand-alone costs or incremental costs of hypothetical utilities. Rather, the goal is to allocate the embedded total cost of service among the various customer classes of real water utilities.

Q DOES MS. MEISENHEIMER'S ECONOMIES OF SCALE DISCUSSION ON PAGES 3 THROUGH 5 PROVIDE A SOUND BASIS FOR DETERMINING WHICH COSTS ARE RELATED TO AVERAGE RATES OF FLOW AND THOSE COSTS WHICH ARE RELATED TO PEAK RATES OF FLOW?

A No, not at all. Numerous, insurmountable problems arise when one attempts to apply this theory to a real situation. First, one would have to determine how much transmission and distribution capacity would be required to provide only average rates of flow and what such a system would have cost to build over several decades. (Such an exercise would also have to be performed for the supply, treatment and storage functions as well, which Ms. Meisenheimer completely ignores.)

Of course, a hodge-podge of stand-alones would never have been built in the first place; and even if they were, their hypothetical creation would require an incalculable number of judgments and assumptions, for literally hundreds of miles of mains, about whether, say, a 2" diameter or a 4" diameter main would be required to provide average flows in particular areas of the Company's service territory. Moreover, all these costs would have to be recalculated every time there was a change in the system average flow rates.

Q ARE THERE OTHER PROBLEMS ASSOCIATED WITH MS. MEISENHEIMER'S USE OF "ECONOMIES OF SCALE" TO ALLOCATE COSTS?

A Yes, there are. Ms. Meisenheimer's example totally ignores the fact that the distribution system is necessary to connect every single customer to the system. Thus, to recognize cost-causation, much of the distribution system cost would have to be allocated on a per-customer basis, instead of on an average or peak flow basis. However, she makes no such recommendation.

Q DID MS. MEISENHEIMER PROVIDE AN EXAMPLE OF ALTERNATE STAND-ALONE SYSTEMS AND THEIR ASSOCIATED COSTS FOR THE ST.LOUIS COUNTY DISTRICT IN HER TESTIMONY?

A No, she did not. She did not provide any such examples for the St. Louis County District or any other operating district of the Company, for that matter. Thus, her testimony provides absolutely no guidance to the Commission about the practical impact of economies of scope on cost allocation.

Q DID MS. MEISENHEIMER DEVELOP AN ECONOMIES OF SCALE FACTOR IN SUPPORT OF A CAPACITY ALLOCATOR FOR USE IN MR. BUSCH'S ALLOCATIONS OF COSTS OF MAINS?

A No, she did not explicitly develop an economies of scale factor, nor did she incorporate her "economies of scope" theory in her creation of a "capacity factor." In fact, she offers no allocation factors at all in her testimony. At Page 8 of her testimony, Ms. Meisenheimer does invoke the possibility of taking the square root of the average to maximum hour use ratio to reduce the proportion of mains-related costs classified to the maximum hour function. However, she does not provide any engineering or other justification for the application of the square root (or any other mathematical operation, for that matter) to this ratio. Moreover, Mr. Busch uses an "economies of scale" factor for mains allocation that was developed by an OPC witness other than Ms. Meisenheimer in a prior water rate case. (I will discuss this in more detail below.) This calls into question the relevance of much of Ms. Meisenheimer's testimony to this case.

Mr. Busch's Testimony

Q DO YOU HAVE ANY GENERAL COMMENTS CONCERNING MR. BUSCH'S TESTIMONY?

A Yes. I have not been able to do a detailed analysis of Mr. Busch's testimony prior to filing this surrebuttal testimony. Mr. Busch provided his cost of service study, and updates to MIEC on November 6, 2003. I have not had enough time to carefully review his workpapers to verify the reasonableness of his recommendations, or to verify the factors he has developed. Therefore, I would like to reserve the right to respond to Mr. Busch's workpapers and cost of service study, after I have had a reasonable amount of time to review them and comment upon their reasonableness.

Q WHERE DID MR. BUSCH GET THE ECONOMIES OF SCALE FACTOR HE USED TO ALLOCATE COSTS OF MAINS IN HIS COST STUDY?

A According to Page 5 of his testimony, Mr. Busch "...utilized the same economies of scale factor developed by Ms. Hong Hu in Case No. WR-2000-281." That Case was filed by MAWC for operating districts other than St. Louis County. Thus, Mr. Busch appears to be relying on someone other than Ms. Meisenheimer for support for his calculations. Moreover, the economies of scale factor he utilizes was admittedly developed with no reference to operations in St. Louis County

Q IS OPC OFFERING MS. HU AS A WITNESS IN THIS CASE?

A Apparently not. I have not seen any testimony offered by Ms. Hu in this case in support of the alleged economies of scale factor used by Mr. Busch in his cost studies.

Q PLEASE COMMENT UPON MR. BUSCH'S APPLICATION OF THE BASE ALLOCATION FACTOR.

A Mr. Busch utilizes the base allocation factor in the allocation of source of supply plant, depreciation and O&M costs to the various customer classes. On Page 6 of his Direct Testimony, Mr. Busch asserts that he utilized the base allocation factor to allocate source of supply costs because such facilities are sized to meet the annual supply requirement in total, whether or not variations in daily needs are experienced.

Q DO YOU AGREE WITH MR. BUSCH'S RATIONALE FOR UTILIZING THE BASE FACTOR TO ALLOCATE SOURCE OF SUPPLY COSTS?

A No, I do not. The Company's source of supply plant consists of investments in structures, pumps and supply mains, which acquire and transport water from the Meramec and Missouri Rivers to the Company's treatment plants. Clearly, these facilities must be sized to meet the Company's summer peak day loads, which demonstrates that variations in daily needs (i.e., peaks) are critically important, despite Mr. Busch's unsupported assertion to the contrary. Thus, the costs associated with source of supply facilities should be allocated in part on a capacity basis. Mr. Busch has failed to do so.

Q CAN YOU CITE AN AUTHORITY THAT AGREES THAT IT IS APPROPRIATE TO ALLOCATE A PORTION OF SOURCE OF SUPPLY COSTS ON A CAPACITY BASIS?

A Yes, I can. The AWWA Manual I cited previously provides an example of a Base Extra Capacity water cost of service study. On page 52, the Manual states that reservoirs can

function to provide for fluctuations in use on a seasonal or daily basis. In such cases, the utility can evaluate whether some portion of the related costs should be allocated to the extra capacity cost function. The Manual also states that costs associated with well water supply can be allocated to maximum day or maximum hour capacity, depending on the basis of design or usage characteristics associated with the well supply.

In both of the cases cited in the Manual (reservoirs and wells), the source of supply was deemed sufficient to meet extra capacity demand requirements. For the Company, which utilizes rivers as a supply source, the capacity of the supply *facilities* must still be of sufficient size to meet peak day requirements. The form taken by the actual water supply – reservoirs, wells, or rivers – is immaterial. If pumping, treatment and distribution facilities must meet peak day loads, it stands to reason that supply facilities must also be sized to do the same. Thus, it is improper to classify them to the base factor. Mr. Busch's election to do so only serves to over-allocate supply costs to high volume customers.

Q PLEASE DISCUSS MR. BUSCH'S APPLICATION OF THE CAPACITY FACTOR TO ALLOCATE MAINS COSTS.

A At Pages 5 and 6 of his testimony, Mr. Busch states that he took the ratio of the square root of a percentage of base and hour and day and hour capacities. The actual allocators and their derivations are not shown in the schedules accompanying OPC's testimony. OPC's cost of service models have been revised since the filing of its direct testimony, and MIEC received copies of these models and associated workpapers only very shortly before the filing deadline for this surrebuttal testimony. Thus, MIEC reserves the right to file supplemental surrebuttal testimony when it has had sufficient

time to analyze the actual calculation and application of the allocation factors used in Mr. Busch's studies.

Q DOES THE AWWA MANUAL YOU CITED EARLIER RECOMMEND THAT THE SQUARE ROOT BE APPLIED TO MAXIMUM DAY AND MAXIMUM HOUR RATIOS?

A No, it does not.

Q WHAT DO YOU CONCLUDE AFTER ANALYZING MR. BUSCH'S COST OF SERVICE STUDY?

A To summarize, the capacity allocation factor used by Mr. Busch is not based on any sound evidence in the record in this case, and his application of the base factor is deficient. Thus, the results of Mr. Busch's cost of service study should be rejected by the Commission. Instead, the Commission should assign cost responsibility to the customer classes with the cost of service study model presented MIEC.

Q WAS OPC'S COST OF SERVICE STUDY USED AS THE BASIS FOR SETTING WATER RATES FOR ST. LOUIS COUNTY IN ITS LAST RATE CASE?

A No, it was not.

Q DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A Yes, it does.

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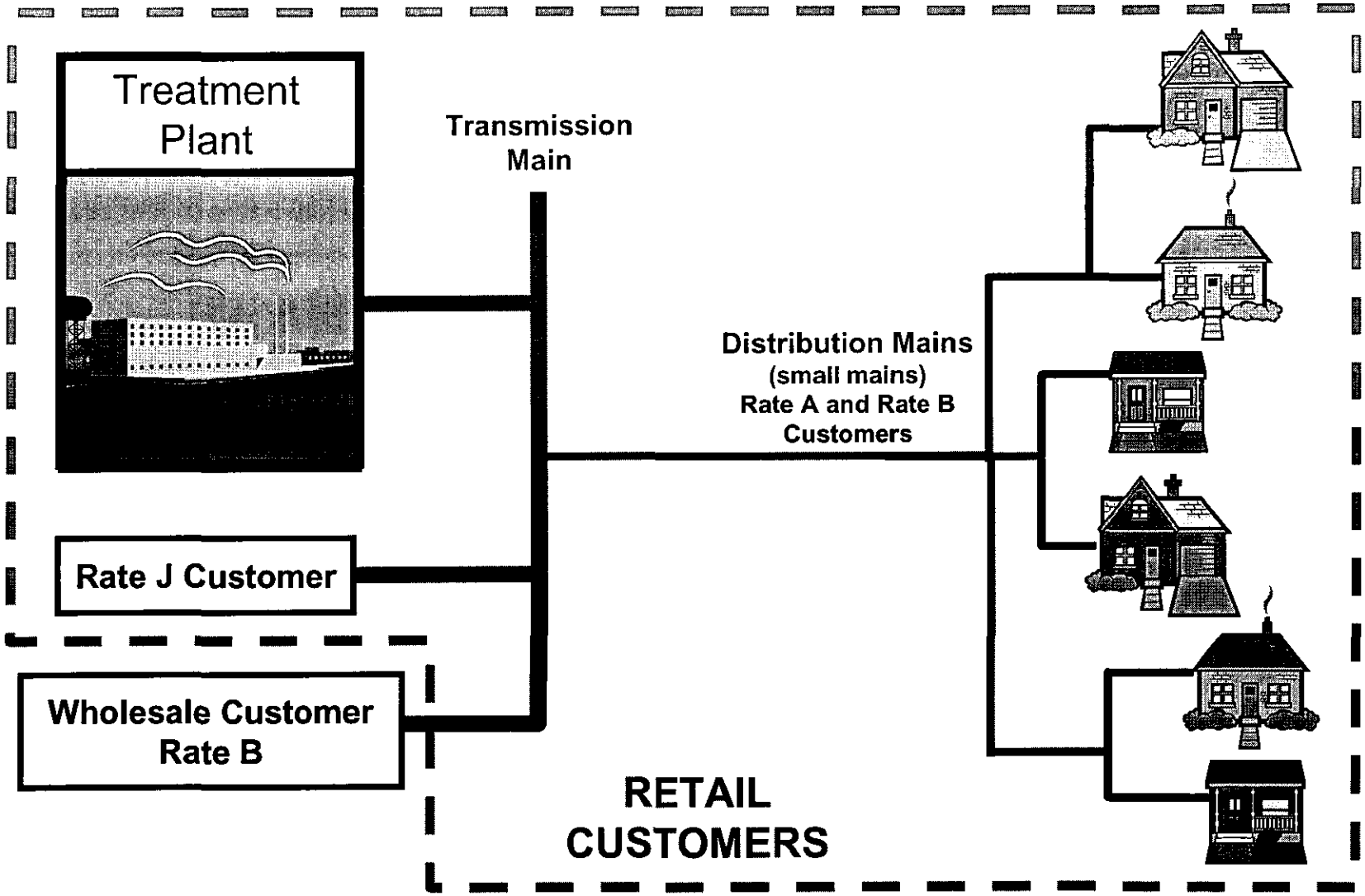
MISSOURI-AMERICAN WATER COMPANY

Water Delivery System



Schedule 1