Exhibit No.:	
Issues:	Water Use Normalization
Witness:	Jerry Scheible, P.E.
Sponsoring Party:	MO PSC Staff
Type of Exhibit:	Surrebuttal Testimony
Case No.:	WR-2008-0311
Date Testimony Prepared:	October 16, 2008

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

SURREBUTTAL TESTIMONY

OF

JERRY SCHEIBLE, P.E.

MISSOURI-AMERICAN WATER COMPANY

CASE NO. WR-2008-0311

Jefferson City, Missouri
October 2008

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas	)))))	Case No. WR-2008-0311

AFFIDAVIT OF JERRY SCHEIBLE

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

Jerry Scheible, of lawful age, on his oath states: that he has participated in the preparation of the following Surrebuttal Testimony in question and answer form, consisting of 4 pages of Surrebuttal Testimony to be presented in the above case, that the answers in the following Surrebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

Jerry Scheible

Subscribed and sworn to before me this 15th day of October, 2008.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942086

Notary Public

SURREBUTTAL TESTIMONY

OF

JERRY SCHEIBLE, P.E.

MISSOURI-AMERICAN WATER COMPANY

CASE NO. WR-2008-0311

Q. Please state your name and business address.

A. My name is Jerry Scheible and my business address is P. O. Box 360, Jefferson City, Missouri 65102.

Q. By whom are you employed and in what capacity?

A. I am a Utility Regulatory Engineer in the Water and Sewer Department, Utility Operations Division of the Missouri Public Service Commission (Staff).

Q. Are you the same Jerry Scheible who previously filed direct and rebuttal testimony in this case?

A. Yes, I am.

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

A. The purpose of my surrebuttal testimony is to address the rebuttal testimony of Missouri-American Water Company (Company) witness Edward L. Spitznagel, Jr., and further explain Staff's recommendation for customer water usages for the various Company customer classes and service areas.

Q. Mr. Spitznagel states on page 5 of Rebuttal testimony, beginning on line 11, that "the last three years, 2005-2007 the weather has been unusually dry," therefore "people

used more water in response to that lack of moisture." He goes on to state beginning on line 16 of the same page, that, "This year, 2008, has so far been very wet, and we can expect a large drop in consumption relative to the recent past." How does this information affect the prediction of customer water usage?

A. It is impossible to predict with any certainty what precipitation levels will be for the remainder of 2008, or for any upcoming future time period, compared to any "normal" trend. Adjusting usage for a single year's data could cause the predicted usage to vary considerably from actual future usage. Mr. Spitznagel claims that 2008 has been unusually wet even though the previous three years have been unusually dry. This reinforces Staff's position that future usage should not be based on past precipitation because future precipitation is impossible to predict with any degree of accuracy. A graph of past annual precipitation totals for St. Louis, Missouri, as reported by National Oceanic and Atmospheric Administration (NOAA), shows ever-changing upward and downward swings. (Spreadsheet and graph attached as Schedule JS-1.) A trend is not evident that could be used to predict how precipitation in future years may compare to a 30-year average. Therefore, precipitation is not an accurate predictor of usage for the near future.

Q. Mr. Spitznagel states on page 5 of his rebuttal testimony, beginning on line 1, that, "It appears that Staff did not take into account the fact that much of that precipitation will not be retained in the soil but rather will be lost to runoff." He goes on to state beginning on line 6 of the same page, "Total precipitation is simply not a good predictor of water consumption because it does not take into account the water retained in the soil and thus available to vegetation." What are some of the short-comings with utilizing precipitation runoff and soil retention in the prediction of customer water usage?

A. Mr. Spitznagel used the Palmer Modified Drought Index (PMDI) to predict usage only for the residential customers in St. Charles and St. Joseph service areas, the commercial customers for the Joplin service area and both the residential and commercial customers that are quarterly-billed in the St. Louis County service area; other methods of prediction were used for the remaining 14 customer classes. In order to account for precipitation runoff and soil retention in predicting future water usage, not only would total future precipitation amounts need to be predicted, but the frequency and intensity of the precipitation would also have to be added as predicted variables.

Q. Did Staff use precipitation runoff, soil retention or total precipitation in its method of predicting customer water usage?

A. No. Staff's method of utilizing a six-year average does not attempt to predict future precipitation totals, frequency or intensity. Therefore, those unknown variables do not impact Staff's recommended customer usage, as only actual past usage was used in calculations.

Q. Mr. Spitznagel states, beginning on line 22 of page 6 and continuing on page 7 of rebuttal, "Over all of Missouri, the last three years have been unusually dry, which had the effect of driving up water consumption. When a simple average is taken, which does not adjust for the dryness, future consumption will be overestimated. For those instances in which there is a downward time trend, there will be a compounding of this overestimation, since future years are estimated based on past, higher consumption." Do you agree that Staff's method of prediction would be affected as these statements allege?

A. No. Staff did not utilize a method wherein a trend line would be used to predict future water usage for the same reasons Mr. Spitznagel states in his rebuttal testimony,

as well as those reasons discussed beginning on line 19 of page 3 of my rebuttal testimony. Staff's utilization of a six-year average method of prediction encompasses the time period that Mr. Spitznagel claims to be "unusually dry" as well as the time period from 2002 to 2004, during which the annual average precipitation was actually *greater* than the 30-year average. Averaging the data set, rather than performing a trend line method, accounts for and adjusts the highs and lows within the data set rather than compounding them. Supporting data is presented in a table on Schedule JS-1.

Q. What other justification is there that Staff's exclusive use of a six-year average method of normalizing water consumption is valid?

A. The same six-year average method was utilized and recommended for use in the instant Case by the Company for nine of 19 of its own customer classes.

Q. Does this conclude your surrebuttal testimony?

A. Yes.

Precipitation averages for St. Louis, MO. Data from NOAA.
www.crh.noaa.gov/images/lsx/climate/stl/precip/precip_stl_monthly_seasonal.xls

Year	Total/yr
2002	40.95
2003	46.06
2004	42.27
total	129.28
3-yr avg	43.09

Difference between 3 yrs from 02 to '06 and 30-yr avg		
30-year avg		'02 - '06 avg
39.14		43.09
	% difference	10.10%

30 year avg	
Year	Total/yr
1978	37.71
1979	29.48
1980	27.48
1981	45.52
1982	54.97
1983	44.8
1984	51.65
1985	50.73
1986	34.88
1987	38.38
1988	33.93
1989	28.6
1990	45.09
1991	33.48
1992	33.49
1993	54.76
1994	34.7
1995	41.68
1996	43.67
1997	31.23
1998	43.62
1999	34.06
2000	37.37
2001	35.29
2002	40.95
2003	46.06
2004	42.27
2005	37.85
2006	29.93
2007	30.57
total	1174.2
avg	39.14