Exhibit No.:	
Issues:	Security Costs – AAO, Chemicals.
	Insurance Other Than Group, Bad Debt
	Expense, Advertising, Dues and
	Donations, Promotional Items,
	Franchise Tax, Roark Sewer Plant
	Operating Expenses
Witness:	Peter J. Thakadiyil
Exhibit Type:	Rebuttal
Sponsoring Party:	Missouri-American Water Company
Case No.:	WR-2011-0337
	SR-2011-0338
Date:	January 19, 2012

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. WR-2011-0337 CASE NO. SR-2011-0338

REBUTTAL TESTIMONY

OF

PETER J. THAKADIYIL

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

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)	CASE NO. WR-2011-0337
RATES FOR WATER AND SEWER)	CASE NO. SR-2011-0338
SERVICE)	

AFFIDAVIT OF PETER J. THAKADIYIL

Peter J. Thakadiyil, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Rebuttal Testimony of Peter J. Thakadiyil"; that said testimony was prepared by him and/or under his direction and supervision; that if inquires were made as to the facts in said testimony, he would respond as therein set forth; and that the aforesaid testimony is true and correct to the best of his knowledge.

eter J. Thakadiyi

State of Missouri County of St. Louis SUBSCRIBED and sworn to Before me this $17^{\frac{14}{2}}$ day of <u>January</u> 2012.

Notary Public

My commission expires:



REBUTTAL TESTIMONY PETER J. THAKADIYIL MISSOURI-AMERICAN WATER COMPANY CASE NO. WR-2011-0337 SR-2011-0338

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1		REBUTTAL TESTIMONY
2		PETER J. THAKADIYIL
3		WITNESS INTRODUCTION
4		
5	Q.	PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.
6	Α.	Peter J. Thakadiyil, Financial Analyst II for American Water Works Service
7		Company ("Service Company"), 727 Craig Road, St. Louis, Missouri 63141.
8		
9	Q.	HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS PROCEEDING?
10	Α.	Yes, I submitted direct testimony in this proceeding on behalf of Missouri-
11		American Water Company ("MAWC" or "Company").
12		
13	Q.	WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?
14	Α.	The purpose of my rebuttal testimony is to respond to MIEC witness Collins'
15		testimony concerning chemicals as well as the Staff Report regarding the
16		following issues on behalf of MAWC:
 17 18 19 20 21 22 23 24 25 26 		 Security Costs – AAO; Chemicals; Insurance Other Than Group; Bad Debt Expense; Advertising; Dues and Donations; Promotional Items; Franchise Tax; and, Roark Sewer Plant Operating Expenses.
27		(1) <u>Security Costs - AAO</u>
28		
29	Q.	WHAT IS THE NATURE OF THE SECURITY COSTS AAO ISSUE?
30	A.	The Company included in rate base the unamortized balance of the regulatory
31		asset associated with security costs. Staff did not include the unamortized
32		balance of the Security AAO in rate base.
33		
34	Q.	PLEASE BRIEFLY DISCUSS THE SECURITY AAO.
35	Α.	In Commission Case No. WO-2002-273, the Commission authorized the
36		Company to defer certain costs associated with security measures taken by the

1 Company in the aftermath of the September 11, 2001 terrorist attacks. The 2 Company was authorized to defer the costs it incurred during a two-year period 3 ending on September 11, 2003. The Company was also authorized to amortize 4 the costs over a 10-year period. The Company began amortizing the costs in 5 December 2002, upon receipt of the Commission's Report and Order.

6

7 Q. WHAT IS THE RESULT OF INCLUDING AN ITEM IN RATE BASE IN THE 8 DETERMINATION OF REVENUE REQUIREMENT?

A. Amortization of an asset account provides for the return of the amount expended
over a period of time. Inclusion of the unrecovered portion of costs in rate base
provides for a return on that investment. Recovery of only the amortization over
a long period of time does not allow a Company to be made whole. Not only
does the Company receive no return on its investment, the recovery through
amortization over a long period of time returns the Company's investment in
dollars that are less valuable than when they were invested.

16

17Q.DO YOU BELIEVE THAT THE COMPANY SHOULD BE AFFORDED RATE18BASE TREATMENT FOR THE UNAMORTIZED BALANCE OF THE19REGULATORY ASSET FOR SECURITY COSTS?

20 Α. Yes. The Company incurred the costs to provide security to its production and 21 distribution systems, its offices, its customers, and its employees. The sole result 22 of this investment of capital was the continued provision of safe and adequate 23 service to MAWC's customers, as the security expenditures were made to protect our customers and the assets that serve them. Therefore, rate base 24 25 treatment of the unamortized balance is appropriate. Just because costs are 26 treated on the balance sheet as deferred items rather than as plant investment is 27 no reason for different treatment in terms of allowing the Company to earn a fair 28 return on the money it has invested. Capital dollars were invested in security measures for the benefit of the system and its customers and the Company 29 30 should be allowed to earn a return on that capital just as it would have been had 31 the investment been recorded to a plant account. The manner in which an item 32 is treated for accounting purposes should not dictate what is appropriate for 33 recovery.

1		
2		(2) <u>CHEMICALS</u>
3		
4	Q.	WHAT ARE THE ISSUES REGARDING CHEMICAL EXPENSE?
5	Α.	One issue is Staff's adjustment to Chemical expense. Staff utilized 2011
6		chemical prices as the basis for the pro forma adjustment to chemicals. Another
7		issue is MIEC's assertion that historical chemical quantities should not be used in
8		the development of the pro forma chemical expense.
9		
10	Q.	HOW DID STAFF CALUCLATE THE PRO FORMA ADJUSTMENT TO
11		CHEMICALS?
12	Α.	Staff calculated the pro forma adjustment to chemicals by applying 2011
13		chemical prices to Staff's pro forma system delivery. This methodology is
14		consistent with the Company's calculation of chemical expense.
15		
16	Q.	DID STAFF UTILIZE THE LATEST AVAILABLE INFORMATION?
17	Α.	No. At the time of its filing in June 2011, the Company utilized chemical prices
18		from contracts in effect at that time. Subsequently, new purchase orders have
19		been finalized and are effective. MAWC provided to Staff copies of the purchase
20		orders of chemicals that were accepted by the Company's vendors when Staff
21		was conducting its on-site audit of the Company's books and records on
22		September 28, 2011.
23	-	
24	Q.	WHY DO YOU BELIEVE THESE NEW CHEMICAL PRICES SHOULD BE
25		INCLUDED IN THE PRO FORMA ADJUSTMENT?
26 27	A.	The purchase orders are currently effective and reflect chemical prices that are
27		now fixed, known to occur and are a measurable amount. The Company has
28		provided Staff with supporting documentation and is willing to provide further
29		documentation, if necessary
3U 21	0	WHAT IS THE IMPACT OF INCLUDING CUEMICAL PRICES FROM THE
3I 22	પ.	WHAT IS THE IMPACT OF INCLUDING CHEMICAL PRICES FROM THE
32		

33 A. The result is an increase of \$100,005 in chemical expense, which is supported by

1

Rebuttal Schedule PJT-1.

2

3 Q. PLEASE ADDRESS MIEC'S ISSUE WITH CHEMICAL EXPENSE.

A. When calculating the pro forma adjustment to chemicals, the Company and Staff
used a three year historical average of chemical quantities per thousand gallons
of system delivery and applied this to the pro forma system delivery. MIEC
contends that the Company should be using test year quantities per system
delivery applied to the pro forma system delivery as the basis for chemical
expense for the period when rates in this case will be in effect.

10

11 Q. WHY IS IT NECESSARY TO USE A THREE YEAR AVERAGE OF CHEMICAL 12 QUANTITIES?

13 Α. By using a three year average of chemical quantities, the Company and Staff 14 have appropriately normalized the amount of chemicals used in the test year. 15 Chemical quantities not only depend upon the amount of water treated, but also 16 on the conditions of the water being treated. For example, when there is 17 increased raw water turbidity, the Company will treat the water with more coagulants. The system delivery may still be low, but the amount of chemicals 18 19 used will be higher than normal. It is therefore necessary to account for the 20 variations in chemical quantities used in the pro forma adjustment in order to 21 reflect a normal year. Illustrated in Rebuttal Schedule PJT-1, the Company has 22 provided an example of chemical quantities that can vary depending on system 23 deliverv

(3) INSURANCE OTHER THAN GROUP

25

24

26

27Q.TO WHAT ASPECT OF THE STAFF REPORT REGARDING INSURANCE28OTHER THAN GROUP WOULD YOU LIKE TO RESPOND?

A. The Company has an issue with the Staff's calculation of its level of pro forma Insurance Other Than Group expense. Staff has excluded the allocated cost of the Directors & Officers ("D & O") liability coverage in the amount of \$51,624.

1Q.ISD&OINSURANCEANECESSARYANDCUSTOMARYBUSINESS2EXPENSE FOR MAWC?

- A. Yes. Without a policy of insurance to indemnify and defend its Board of Directors
 and its corporate officers, it would be extremely difficult to recruit qualified
 persons to serve on a Board of Directors or in the capacity of executive
 management.
- 8 Q. WHY IS D & O COVERAGE AN APPROPRIATE AND REASONABLE
 9 EXPENSE FOR MAWC?
- 10 Α. As a publicly traded company, AWW, as well as MAWC's directors and officers 11 are subject to the Securities Exchange Commission (SEC) Act, the Sarbanes 12 Oxley (SOX) Act, and many other federal and state regulations. The SOX Act established new or enhanced standards for all U.S. public company boards, 13 14 management, and public accounting firms. The SOX Act contains 11 titles, or 15 sections, ranging from additional Corporate Board responsibilities to criminal 16 penalties, and requires the SEC to implement rulings on requirements to comply 17 with the new law. The SOX Act also covers issues such as auditor independence, corporate governance, internal control assessment, and 18 19 enhanced financial disclosure. Prospective internal and external candidates, 20 who are invited to be a member of a company board, are subject to potential 21 litigation in civil and criminal courts. These many complex and demanding 22 corporate governance obligations are accompanied by potential fines and 23 penalties and possible civil and even criminal liabilities. Any individual taking on such risks will expect and demand insurance coverage for claims that may arise 24 25 as a result of being in such a position.
- 26

7

27 Q. SHOULD D&O COVERAGE EXPENSE BE INCLUDED IN THE COMPANY'S 28 REVENUE REQUIREMENT?

A. Yes. This type of expense is crucial to the Company's ability to recruit and
 maintain qualified individuals to serve on its Board of Directors and in the
 capacity as senior Company officers. These expenses are considered
 customary, particularly for large, publicly traded corporations.

33

1		(4) <u>BAD DEBT EXPENSE</u>
2		
3	Q.	WHAT IS THE ISSUE REGARDING BAD DEBT EXPENSE?
4	Α.	The Company and Staff used the same methodology to calculate the pro forma,
5		present rate bad debt expense. However, the Company also calculated an
6		adjustment for bad debt expense based on pro forma, proposed rates. This
7		adjustment is necessary to account for the Company's proposed rate increase.
8		Staff chose not to make an adjustment for bad debt expense based on the
9		proposed rate increase.
10		
11	Q.	PLEASE DESCRIBE THE METHODOLOGY USED TO CALCULATE THE PRO
12		FORMA PRESENT RATE ADJUSTMENT TO BAD DEBT EXPENSE.
13	A.	The Company and Staff calculated a three year average bad debt expense ratio.
14		The ratio is based on net charge-offs divided by billed water revenue. This ratio is
15		then applied to pro forma, present rate revenues.
16		
17	Q.	IS STAFF BEING CONSISTENT WITH ITS METHODOLOGY OF APPLYING THE
18		BAD DEBT EXPENSE RATIO TO PRO FORMA REVENUES?
19	A.	No. Staff applies the bad debt ratio to present rates, but not to the proposed
20		rates the Company will collect as a result of this case. The regulatory process is
21		designed so that the Company will recover in rates the normalized level of
22		expenses it incurs on a going forward basis. It is illogical for Staff to use
23		revenues in its calculation of bad debt expense if it does not recognize that pro
24		forma revenues will change based on any rate increase arising from this case.
25		
26	Q.	IS STAFF'S CALCULATION OF BAD DEBT EXPENSE REPRESENTATIVE OF A
27		NORMALIZED LEVEL OF EXPENSE?
28	Α.	No. Given the fact that Staff bases its pro forma adjustment on present rates, the
29		level of bad debt expense will be understated because of the lower level of
30		revenues used in the calculation. Staff's level of revenues is not representative
31		of a normalized year, when rates set in this case will be effective, because the
32		rates used in Staff's calculation will no longer be in effect. The bad debt expense
33		ratio should be applied to any rate increase awarded in this case in order to

1		calculate a normalized level of expense for bad debt.
2	•	WILLAT IN THE IMPART OF HOMA DOG FORMA DOGDOOFD DATED FOR
3	Q.	WHAT IS THE IMPACT OF USING PRO FORMA PROPOSED RATES FOR
4		THE CALCULATION OF BAD DEBT EXPENSE?
5	А.	Based on the Staff report, bad debt expense would increase by \$274,274, if the
6		Company's rate increase was approved as filed.
8		(5) ADVERTISING
9		
10	Q.	WHAT IS THE ISSUE REGARDING ADVERTISING?
11	Α.	Staff has disallowed recovery of the cost of several advertisements that MAWC
12		believes should be allowed.
13		
14	Q.	WHAT TYPES OF ADVERTISEMENTS MAY BE INCLUDED IN THE
15		COMPANY'S REVENUE REQUIREMENT?
16	Α.	According to the Staff Report there are three categories of advertisements
17		recognized by the Commission that can be included in the revenue
18		requirement. The categories that may be included are:
19		1. General: informational advertising that is useful in the provision of adequate
20		service;
21		
22		2. Safety: advertising which conveys the ways to safely use electricity [water] and
23		to avoid accidents; and,
24		
25		3. Promotional: advertising used to encourage or promote the use of electricity
26		[the efficient use of water].
27		
28	Q.	WHAT TYPES OF ADVERTISEMENTS WERE EXCLUDED?
29	Α.	There were several advertisements that were disallowed based on Staff's
30		workpapers. The Company agrees with Staff's interpretation of prior
31		Commission orders that certain advertisements should be disallowed because
32		these ads would be considered Institutional in nature. However, the Company
33		does not agree with Staff's interpretation on ads relating to the Rivermiles

Public Education Video, Watershed Education and World Bird Community
 programs.

3

4Q.WHY SHOULD THESE ADVERTISEMENTS BE INCLUDED IN THE5COMPANY'S REVENUE REQUIREMENT?

6 Α. The Rivermiles Public Education Video explains how a water treatment plant 7 works, how water comes to customers' homes and what individuals can do everyday to preserve the quality of water in our rivers. 8 This information 9 increases understanding among customers and supports our provision of service. It is airing, free of charge on PBS stations throughout Missouri. The 10 11 Watershed and World Bird Community programs advertisements encourage 12 customers to attend our watershed educational programs. These programs educate customers on how to keep rivers clean through simple steps such as 13 14 recycling and not overusing lawn chemicals etc. These steps to clean 15 sourcewaters will, over time, help to reduce the cost of some chemicals, such as 16 carbon, helping us provide more efficient water treatment. Customers may not 17 realize that fertilizers, herbicides, and pollution can end up in the water system, 18 and that these pollutants can dramatically impact water quality. This information 19 is valuable to customers because they need to understand the role they play in 20 the provision of water service.

- For the reasons noted above, the advertising that has been disallowed by
 Staff should be classified as General Informational and/or Safety and allowed as
 part of the Company's revenue requirement.
- 24

25Q.WHAT IS THE IMPACT OF INCLUDING ADDITIONAL GENERAL AND SAFTEY26ADVERTISING?

- A. Advertising expense will increase by \$14,288 with the inclusion of the
 advertisements for Rivermiles Public Education Video, Watershed Education and
 World Bird Community programs. The support for this additional advertising
 expense can be found in Rebuttal Schedule PJT-2.
- 31
- 32
- 33

1	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY REGARDING DUES AND
2		DONATIONS?
3	Α.	Staff has excluded some Company Dues and Donations from its Revenue
4		Requirement. The Company believes many of the excluded Dues and
5		Donations provide a benefit to the customer and should therefore be included
6		in its revenue requirement.
7		
8	Q.	WHAT DUES AND DONATIONS HAVE BEEN EXCLUDED BY STAFF?
9	Α.	Staff has excluded donations to local charitable organizations, membership
10		dues to the Missouri Chamber of Commerce, membership dues to rotary
11		clubs, and dues to professional organizations.
12		
13	Q.	DID STAFF DISALLOW ALL DUES AND DONATIONS RELATING TO
14		CHAMBERS OF COMMERCE?
15	Α.	No. The Staff allowed recovery of dues for local chamber of commerce
16		organizations, however the Staff disallowed dues for the Missouri Chamber of
17		Commerce.
18		
19	Q.	WHY DID STAFF DISALLOW MISSOURI CHAMBER OF COMMERCE DUES?
20	Α.	Staff disallowed these dues because they believe the Missouri Chamber of
21		Commerce dues are duplicative of the dues paid to the local Chamber of
22		Commerce organizations.
23		
24	Q.	WHY IS IT IMPORTANT FOR MAWC TO BE A MEMBER OF THE
25		MISSOURI CHAMBER OF COMMERCE?
26	Α.	The Missouri Chamber of Commerce provides companies with the resources
27		to manage their business effectively and efficiently. Members have access to
28		cutting-edge information, leadership and professional development programs,
29		and business products, services and networking opportunities to help a
30		business grow.
31		
32	Q.	HOW DOES THE STATE CHAMBER DIFFER FROM LOCAL CHAMBERS

33 OF COMMERCE?

1 Α. The two are very different in scope and application. Local chambers are 2 oriented to local communities and the Missouri Chamber is focused on issues 3 impacting the entire state. Therefore the efforts are not duplicative. Local chambers understand the needs and resource availability on a local level and 4 5 work to improve local working and business conditions. MAWC's participation 6 in local chambers helps enables the Company to stay in touch with and be 7 accessible to its customers. The Missouri Chamber of Commerce deals with larger scope issues and industries such as aerospace, biotechnology and 8 9 financial services, and is dedicated to creating a stronger environment for 10 business growth and economic development. The State Chamber of Commerce is focused on broader educational and economic development 11 12 issues that impact the state or region as a whole.

13

14Q.CAN YOU PROVIDE EXAMPLES OF THE EDUCATION AND ECONOMIC15DEVELOPMENT PROGRAMS SPONSORED BY THE MISSOURI16CHAMBER OF COMMERCE AND EXPLAIN HOW THEY BENEFIT17CUSTOMERS?

Yes. The Missouri Chamber of Commerce sponsors the Show Me Scholars 18 Α. 19 Program, Missouri Mathematics and Science Coalition and the Leadership 20 Missouri Program. The Staff has proposed disallowance of the costs of all 21 programs, such as these, that are organized or funded by the State Chamber. 22 The educational programs mentioned help improve existing students' and 23 leaders' productivity, lead to better public awareness, and develop employees and future leaders more capable of dealing with issues of statewide 24 25 importance. The Show Me Scholars Program's curriculum enables students to 26 better prepare for the future by enrolling in challenging courses. Missouri 27 Mathematics and Science Coalition is a partnership of state businesses, 28 education and community leaders that are developing programs to boost student achievement in math, engineering, technology and science. These 29 30 students are part of the future workforce that may someday come to work in 31 the field of water production. It is imperative that the students of today have 32 the skills to understand the engineering, math, and science that are necessary 33 to operate these facilities. Founded in 1990, Leadership Missouri allows

1 participants to take a close look at topics of interest that are important to 2 Missouri, such as transportation, health care, and economic development. 3 Having current leaders that are knowledgeable and who exchange ideas with top state agency personnel can only provide a better understanding of the 4 5 operation of our state's government and serve to strengthen the recognition of 6 problems and identify solutions important to the state. A more educated 7 workforce and a better understanding of statewide problems strengthen the competitive position of the state and results in growth which, in turn, tends to 8 9 stabilize utility rates. Growth can stabilize utility rates by spreading fixed costs 10 over a larger customer base. The Missouri Chamber of Commerce also 11 participates in trade missions and works with state agencies to attract and 12 retain industry within the state. Success in that effort would provide growth in manufacturers in the state, and specifically within the MAWC service territory. 13 14 Such economic development efforts are essential to a viable, growing 15 economy and go hand in hand with financially strong utilities and adequate 16 utility infrastructure.

17

18 Q. WHAT IS THE IMPACT OF INCLUDING MISSOURI CHAMBER OF

19 COMMERCE DUES?

- A. Dues and Donations expense will increase by \$11,535. This amount is
 supported by Rebuttal Schedule PJT-3.
 - (7) PROMOTIONAL ITEMS

23 24

22

25Q.WHAT ISSUE WOULD YOU LIKE TO DISCUSS REGARDING PROMOTIONAL26ITEMS?

27 I would like to discuss the Staff's adjustment that limited recovery of costs for Α. 28 promotional items. MAWC believes certain items coded to the Promotional Items Expense should be allowed for recovery. Staff states that these "giveaways" are not 29 30 necessary for the provision of safe and adequate service and provide no benefit to 31 the ratepayer. However, many of the promotional items carry informational 32 messages to remind water consumers of how to conserve on water usage and how 33 the water systems are impacted by ground pollutants. More efficient water usage by customers can have a direct impact on their bill. Better education about the impact of
 ground pollutants such as fertilizers and herbicides on the watersheds may convince
 consumers to use different methods of treating their lawns. This would have a direct
 affect on the water quality in rivers and lakes.

- 5
- 6

Q. WHY DOES MAWC PURCHASE PROMOTIONAL ITEMS?

7 Α. MAWC purchases inexpensive promotional items as part of its community outreach 8 program. Every year, MAWC employees volunteer their time at river clean-ups, 9 watershed preservation and water-related educational events in collaboration with a 10 variety of community organizations. These community events give our customers an 11 opportunity to talk with and ask questions of a broad cross-section of water company 12 employees. In 2011, Missouri American Water deployed 271 volunteers to 35 community service events across the state. Many of the promotional items that we 13 14 distribute are educational in nature or are supportive of the environmental mission of 15 these community activities.

16

17 Q. WHAT PROMOTIONAL ITEMS DO YOU CONSIDER TO BE EDUCATIONAL IN 18 NATURE?

A. Staff disallowed the expense for purchasing water bottles. Missouri American Water
 distributes water bottles at multiple community events. These bottles promote the use
 of tap water (over bottled water) which helps support our mission and provision of
 service. The bottles also provide our web address so customers can get additional
 information from our website.

24

25 Q. HOW DO PROMOTIONAL ITEMS HELP SUPPORT THE MISSION OF

26 COMMUNITY OUTREACH EVENTS?

A. The water bottles that are provided as part of the Company's community outreach
speak to the environmental stewardship mission of the community events that MAWC
supports, largely through our employees' volunteer time. The organizers of these
community events are also dedicated to minimizing the environmental impact of their
community activities. To achieve this goal, these community groups frequently ask
MAWC to contribute water bottles to help keep event volunteers and attendees
hydrated, and reduce the need for bottled water.

1		
2	Q.	WHAT ARE THE ENVIORNMENTAL AND HEALTH CONCERNS WITH PLASTIC
3		WATER BOTTLES?
4	Α.	The production of bottled water creates waste, there has been no evidence that
5		bottled water is superior to tap water and most importantly plastic bottles may pose a
6		health risk when chemicals in the plastic break down. For additional information
7		please see the article "Water Bottle Pollution Facts" attached to my Rebuttal
8		testimony as Schedule PJT-4.
9		
10	Q.	WHAT IS THE IMPACT OF INCLUDING THE PROMOTIONAL ITEMS?
11	Α.	Staff has excluded \$36,348 from the revenue requirement. The Company seeks to
12		include \$14,164 in the revenue requirement, which is supported by Rebuttal Schedule
13		PJT-5.
14		
15		(8) FRANCHISE TAX
16		
17	Q.	WHAT IS THE ISSUE WITH THE FRANCHISE TAX?
18	Α.	Staff based the franchise tax amount on the 2009 assessment of \$415,000. The pro
19		forma level of franchise tax expense should be based on the latest payment. The
20		Company has already paid \$440,000 for the 2010 assessment. The Staff should
21		utilize the most current information available and base their pro forma adjustment of
22		franchise tax expense on the 2010 assessment.
23		
24	Q.	WHAT IS THE IMPACT OF INCLUDING THE 2010 FRANCHISE TAX
25		ASSESSMENT?
26	Α.	Franchise tax expense will increase by \$25,000.
27		
28		(9) ROARK SEWER PLANT OPERATING EXPENSES
29		
30	Q.	WHAT IS THE ISSUE WITH ROARK SEWER PLANT OPERATING EXPENSES?
31	Α.	In MAWC's filing, the Company included \$393,946 in chemical expenses related to
32		Roark Sewer. This amount was disallowed by Staff because the Company could not
33		provide support for the chemical expense.

1

2 Q. HAS THE COMPANY DETERMINED THE ORIGIN OF THE ROARK SEWER 3 PLANT OPERATING EXPENSES?

A. Yes. After further research it was learned that the Company misclassified plant
operation expense as chemicals. Based on the 2010 Roark Water & Sewer, Inc.
annual report that was filed with the Commission, \$393,946 of plant operation
expense was incurred during the test year. The expenses include contracted
maintenance expenses, repairs of sewer plant and utility bills.

9

10Q.ARE THE TEST YEAR COSTS OF \$393,946 REFLECTIVE OF THE LEVELS OF11EXPENSE THAT WILL BE INCURRED DURING THE PERIOD WHEN RATES ARE12IN EFFECT?

13 Α. Yes. Roark does not treat its wastewater. The Company pays to have its 14 wastewater treated. The City of Branson treats the wastewater from the Roark sewer 15 district and charges the Company \$4.80 per thousand gallons for residential service 16 and \$9.23 per thousand gallons for commercial service. Based on the usage 17 included in the Company's filing for Roark Water, the annualized level of expense for 18 this contracted maintenance service alone would be \$288,739 or more than 70% of 19 the total test year plant operation expenses. An ongoing level for all plant operation 20 expense, based on test year expense of \$393,946, is reasonable.

21

Q. WILL THESE EXPENSES CONTINUE WITH MAWC'S OWNERSHIP OF THE ROARK PROPERTIES?

- A. Yes. They are normal operating expenses and will continue to be incurred underMAWC ownership.
- 26

27 Q. WHAT IS YOUR RECOMMENDATION REGARDING ROARK SEWER PLANT 28 OPERATING EXPENSES?

A. Staff recognized that these costs were recorded in the wrong expense account and have properly reduced chemical expenses. However, Staff has inappropriately assumed that no plant operation expense will be incurred in the future. The Staff should reclassify the expenses in their respective accounts and allow the Company recovery of plant operation expense in the amount of \$393,946.

- 2 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?
- 3 A. Yes.

District	Part # / Remark	Part Description	Units	Expense	System Delivery	Units/Sys Del	Units/Sys Del	System Delievery	Units/Sys Del	Price	Expense
1702	170A-BULK	Ammonia - Aqua,19%-Bulk	2,133,698	199,332	59,312,310	0.03597	0.03424	58,914,543	0.03424	0.11	221,883
	170A-BULK	Ammonia - Aqua,19%-Bulk	435,264	40,776	59,312,310	0.00734	0.00736	58,914,543	0.00736	0.115	49,838
	180C-100LB	Calcium Hypo,65%-100LB	4,750	7,879	59,312,310	0.00008	0.00005	58,914,543	0.00005	1.55	4,394
	200A-40LB	Carbon - PAC, Lignite-40LB	78,355	60,228	59,312,310	0.00132	0.00000	58,914,543	0.00132	0.795	61,874
	200A-40LB	Carbon - PAC, Lignite-40LB	68,057	56,132	59,312,310	0.00115	0.00000	58,914,543	0.00115	0.865	58,475
	200A-BULK	Carbon - PAC, Lignite-Bulk	254,989	168,756	59,312,310	0.00430	0.00396	58,914,543	0.00396	0.686	160,195
	200A-BULK	Carbon - PAC, Lignite-Bulk	692,549	464,657	59,312,310	0.01168	0.01385	58,914,543	0.01385	0.685	558,969
	220A-2000LB	Chlorine ,100%-2000LB	1,730,342	383,245	59,312,310	0.02917	0.03134	58,914,543	0.03134	0.2	369,288
	230A-50LB	Copper Sulfate, 100%-50LB	6,100	10,416	59,312,310	0.00010	0.00013	58,914,543	0.00013	1.93	14,385
	230A-50LB	Copper Sulfate, 100%-50LB	3,375	6,696	59,312,310	0.00006	0.00003	58,914,543	0.00003	2.05	3,445
	250A-BULK	Ferric Chloride,38%-Bulk	5,163,198	504,805	59,312,310	0.08705	0.00000	58,914,543	0.08705	0.0798	409,260
	260A-BULK	Ferric Sulfate - Dry,100%-Bulk	3,125,116	849,016	59,312,310	0.05269	0.08969	58,914,543	0.08969	0.2098	1,108,648
	270A-BULK	Ferric Sulfate - Liq,60%-Bulk	4,810,952	410,397	59,312,310	0.08111	0.13695	58,914,543	0.13695	0.0698	563,154
	300A-BULK	HFS Acid,23%-Bulk	1,642,618	464,641	59,312,310	0.02769	0.02840	58,914,543	0.02840	0.24	401,547
	300A-BULK	HFS Acid,23%-Bulk	540,983	153,306	59,312,310	0.00912	0.00929	58,914,543	0.00929	0.24	131,314
	350G-BULK	Ortho-Poly P, Aqua Mag 9100 Bulk.	124,960	70,681	59,312,310	0.00211	0.00000	58,914,543	0.00211	0.49	60,820
	350G-BULK	Ortho-Poly P,Aqua Mag 9100 Bulk.	108,814	54,702	59,312,310	0.00183	0.00000	58,914,543	0.00183	0.49	52,961
	360A-BULK	Pebble Lime,100%-Bulk	46,051,125	2,994,023	59,312,310	0.77642	0.77176	58,914,543	0.77176	0.0695	3,160,015
	360A-BULK	Pebble Lime,100%-Bulk	10,747,964	694,913	59,312,310	0.18121	0.23803	58,914,543	0.23803	0.0695	974,634
	400C-50LB	Polymr,An,Superflc a110,A3333P	696	1,244	59,312,310	0.00001	0.00001	58,914,543	0.00001	2.75	1,975
	400W-50LB	Polymer, An, Cedar Floc 566	92	206	59,312,310	0.00000	0.00000	58,914,543	0.00000	2.75	251
	410V-BULK	Polymr,Cat,Neat(pDADMAC)	187,281	66,051	59,312,310	0.00316	0.00460	58,914,543	0.00460	0.56	151,684
	410V-BULK	Polymr,Cat,Neat(pDADMAC)	640,284	224,638	59,312,310	0.01080	0.01220	58,914,543	0.01220	0.48	345,075
	511A-BULK	Sodium Chloride,100% Pure-BULK	2,555,536	194,721	59,312,310	0.04309	0.03748	58,914,543	0.03748	0.076	167,796
	570A-MINI BULK	Sodium Hypo,13%- Mini Bulk	(7,652)	(1,672	59,312,310	(0.00013)	0.00000	58,914,543	(0.00013) 0.095	(722)
	570A-MINI BULK	Sodium Hypo,13%- Mini Bulk	(3,900)	(852	59,312,310	(0.00007)	0.00000	58,914,543	(0.00007) 0.095	(368)
	570A-Mini Bulk	Sodium Hypo,13%- Mini Bulk	13,358	2,857	59,312,310	0.00023	0.00000	58,914,543	0.00023	0.095	1,260
	570A-Mini Bulk	Sodium Hypo,13%- Mini Bulk	17,470	3,835	59,312,310	0.00029	0.00000	58,914,543	0.00029	0.095	1,649
1702 Total			81,126,374	8,085,629							9,033,699
1703	150A-BULK	Ammonia - Anhyd,100%-Bulk	32,773	22,840	6,395,498	0.00512	0.00452	6,403,834	0.00452	0.75	21,692
	220A-2000LB	Chlorine ,100%-2000LB	325,477	72,974	6,395,498	0.05089	0.04990	6,403,834	0.04990	0.245	78,295
1703	250A-BULK	Ferric Chloride,38%-Bulk	10,096	1,667	6,395,498	0.00158	0.06101	6,403,834	0.06101	0.075	29,302
	290B-15GA	Hydrochloric Acid 31%	7,435	2,499	6,395,498	0.00116	0.00126	6,403,834	0.00126	0.28	2,252
1703	300A-BULK	HFS Acid,23%-Bulk	59,846	21,009	6,395,498	0.00936	0.01708	6,403,834	0.01708	0.3	32,818
	300A-MINI BULK	HFS Acid,23%-Mini Bulk	50,530	17,307	6,395,498	0.00790	0.00000	6,403,834	0.00790	0.3	15,179
	350G-BULK	Ortho-Poly P, Aqua Mag 9100 Bulk.	84,849	60,766	6,395,498	0.01327	0.00000	6,403,834	0.01327	0.49	41,630
	350G-BULK	Ortho-Poly P, Aqua Mag 9100 Bulk.	15,931	8,002	6,395,498	0.00249	0.00000	6,403,834	0.00249	0.49	7,816
	360A-BULK	Pebble Lime,100%-Bulk	6,590,562	476,832	6,395,498	1.03050	1.05829	6,403,834	1.05829	0.077	521,835
	400AA-42LB	Polymr,An,Robin, A-30	174	400	6,395,498	0.00003	0.00000	6,403,834	0.00003	4	697
1703	400W-50LB	Polymer, An, CedarFloc 566	574	300	6,395,498	0.00009	0.00000	6,403,834	0.00009	4	2,299
	510A-50LB	Sodium Chloride,90% Pure-50LB	35,608	4,063	6,395,498	0.00557	0.00478	6,403,834	0.00478	0.1	3,063
1703 Total			7,213,855	688,659							756,878
1704	150A-150LB	Ammonia - Anhyd,100%-150LB	4,522	7,074	757,078	0.00597	0.00556	734,384	0.00556	1.55	6,333
	220A-150LB	Chlorine ,100%-150LB	25,660	12,052	757,078	0.03389	0.03380	734,384	0.03380	0.47	11,667
1704	350G-BULK	Ortho-Poly P, Aqua Mag 9100 Bulk.	509	233	757,078	0.00067	0.00000	734,384	0.00067	0.59	291
	350A-55GA	Ortho-Poly P,Carus 8500-55GA	2,371	1,179	757,078	0.00313	0.00000	734,384	0.00313	0.59	1,357
	350G-55GA	Ortho-Poly P, Aqua Mag 9100 55GA.	5,016	3,060	757,078	0.00663	0.00000	734,384	0.00663	0.59	2,871
	360A-BULK	Pebble Lime, 100%-Bulk	1,272,000	89,757	757,078	1.68014	1.90533	734,384	1.90533	0.0709	99,206
1704 Total			1,310,078	113,354							121,725
1706	220A-150LB	Chlorine ,100%-150LB	17,291	7,988	884,427	0.01955	0.01414	888,815	0.01414	0.47	5,908
1706	350G-BULK	Ortho-Poly P, Agua Mag 9100 Bulk.	3,530	2,249	884,427	0.00399	0.00000	888,815	0.00399	0.59	2,093
	350G-55GA	Ortho-Poly P, Agua Mag 9100 55GA.	6,387	3,847	884,427	0.00722	0.00000	888,815	0.00722	0.59	3,787
	700A-BULK	Liquid Oxygen - Bulk	204,555	15,993	884,427	0.23129	0.29153	888,815	0.29153	0.0571	14,795
1706 Total		. ,.	231.763	30.077	,			,			26.583
1708	220A-150LB	Chlorine ,100%-150LB	1.118	509	27.215	0.04108	0.04187	26.401	0.04187	0.47	520
	280A-50LB	Hydrated Lime, 72% CaO-50LB	10.900	2.545	27.215	0.40051	0.34197	26.401	0.34197	0.19	1.715
	480A-700LB	Sodium Alum,5% caustic-700LB	1.030	588	27.215	0.03785	0.08914	26.401	0.08914	0.57	1.341
1708 Total		· ,·· · ·····	13.048	3.643	,			-,			3.576
1710	210A-BULK	Carbon Dioxide.100%-Bulk	29.632	1,345	672.206	0.04408	0.05165	682,677	0.05165	0.0438	1.544
	220A-150LB	Chlorine ,100%-150LB	25.436	11.640	672.206	0.03784	0.03848	682.677	0.03848	0.44	11.559
	270A-55GA	Ferric Sulfate - Lig,60%-55GA	38.574	10.346	672.206	0.05738	0.00000	682.677	0.05738	0.23	9,010
											, -

District	Part # / Remark	Part Description	Units Ex	xpense	System Delivery	Units/Sys Del	Units/Sys Del	System Delievery	Units/Sys Del	Price	Expense
	270C-55GA	Ferric Sulfate Liq 50% 10% Iron	16,800	3,715	672,206	0.02499	0.00000	682,677	0.02499	0.17	2,900
	360A-BULK	Pebble Lime,100%-Bulk	522,926	36,060	672,206	0.77793	0.82669	682,677	0.82669	0.0745	42,045
	400X-5GA	Polymer, An, Cedar Floc 554	282	705	672,206	0.00042	0.00000	682,677	0.00042	5.89	1,687
	400X-5GA	Polymer, An, Cedar Floc 554	54	199	672,206	0.00008	0.00000	682,677	0.00008	5.89	323
1710 Total			633,704	64,011							69,068
1711	100B-5GA	Algicide, Algimycin Algaecide	650	2,712	4,882,219	0.00013	0.00014	4,807,089	0.00014	3.5	2,349
	140A-BULK	Alum Sulfate - Liquid,50%-Bulk	1,508,794	186,589	4,882,219	0.30904	0.27883	4,807,089	0.27883	0.12	160,842
	170A-BULK	Ammonia - Aqua,19%-Bulk	180,266	34,711	4,882,219	0.03692	0.04059	4,807,089	0.04059	0.1795	35,025
	171A-55GA	Ammonia - Aqua,19%-55GA	15,344	3,056	4,882,219	0.00314	0.00000	4,807,089	0.00314	0.215	3,248
	200A-900LB	Carbon - PAC, Lignite-900LB	7,200	6,749	4,882,219	0.00147	0.00182	4,807,089	0.00182	0.87	7,601
	220A-150LB	Chlorine ,100%-150LB	9,507	4,321	4,882,219	0.00195	0.00103	4,807,089	0.00103	0.44	2,181
	230A-50LB	Copper Sulfate, 100%-50LB	170	312	4,882,219	0.00003	0.00003	4,807,089	0.00003	0.198	33
	280B-BULK	Liquid Lime,37.5% CaO-BULK	121,529	10,291	4,882,219	0.02489	0.02690	4,807,089	0.02690	0.1776	22,963
	300A-55GA	HFS Acid,23%-55GA	39	19	4,882,219	0.00001	0.00019	4,807,089	0.00019	0.39	354
	300A-BULK	HFS Acid,23%-Bulk	182,773	59,096	4,882,219	0.03744	0.03675	4,807,089	0.03675	0.25	44,166
	400W-50LB	Polymer, An, Cedar Floc 566	135	269	4,882,219	0.00003	0.00000	4,807,089	0.00003	3.05	405
	410DD-BULK	Polymer,Cat,CedarFloc 524	18,024	9,956	4,882,219	0.00369	0.00000	4,807,089	0.00369	0.955	16,948
	410DD-BULK	Polymer,Cat,CedarFloc 524	9,239	4,558	4,882,219	0.00189	0.00000	4,807,089	0.00189	0.955	8,687
	511A-BULK	Sodium Chloride,100% Pure-BULK	694,275	61,322	4,882,219	0.14220	0.12384	4,807,089	0.12384	0.0815	48,518
	570A-300GA	Sodium Hypo,13%-300GA	14,625	3,314	4,882,219	0.00300	0.00000	4,807,089	0.00300	0.275	3,960
	570A-55GA	Sodium Hypo,13%-55GA	3,755	787	4,882,219	0.00077	0.01973	4,807,089	0.01973	0.275	26,082
1711 Total			2,766,325	388,062							383,362
1712	160A-50LB	Amonium Slfate,100%-50LB	36,500	16,134	1,307,708	0.02791	0.02578	1,352,931	0.02578	0.495	17,264
	200A-BULK	Carbon - PAC, Lignite-Bulk	39,929	29,007	1,307,708	0.03053	0.03200	1,352,931	0.03200	0.738	31,948
	210A-BULK	Carbon Dioxide,100%-Bulk	260,659	11,685	1,307,708	0.19933	0.20839	1,352,931	0.20839	0.0319	8,994
	270A-BULK	Ferric Sulfate - Liq,60%-Bulk	569,068	48,971	1,307,708	0.43516	0.00000	1,352,931	0.43516	0.074	43,567
	300A-BULK	HFS Acid,23%-Bulk	42,525	13,320	1,307,708	0.03252	0.04365	1,352,931	0.04365	0.25	14,765
	360A-BULK	Pebble Lime,100%-Bulk	1,709,558	117,487	1,307,708	1.30729	1.26671	1,352,931	1.26671	0.0745	127,676
	440A-50LB	Plyphos,WSU319,CalciQ-MW-50LB	27	6	1,307,708	0.00002	0.00518	1,352,931	0.00518	1.26	8,834
	411U-55GA	Polymer,Cat,CedarFloc 526	8,954	4,213	1,307,708	0.00685	0.00000	1,352,931	0.00685	0.685	6,346
	440A-50LB	Plyphos,WSU319,CalciQ-MW-50LB	8,600	12,403	1,307,708	0.00658	0.00518	1,352,931	0.00518	1.26	8,834
	570A-BULK	Sodium Hypo,13%-Bulk	455,256	34,465	1,307,708	0.34813	0.40794	1,352,931	0.40794	0.087	48,017
1712 Total			3,131,076	287,691							316,245
1714	570A-15GA	Sodium Hypo,13%-15GA	12,254	2,467	31,810	0.38522	0.35299	36,593	0.35299	0.212	2,738
1714 Total			12,254	2,467							2,738
Grand Total			96,438,477	9,663,592							10,713,874

Missouri American Water Historical Chemical Usage

Carbon-Powdered Activated Bulk

Chemical	System	Chemical Units per
Units	Delivery	System Delivery
1,349,410	63,956,549	0.0211
741,768	59,373,244	0.0125
985,999	62,206,420	0.0159
1,182,724	67,530,680	0.0175
1,171,657	69,216,108	0.0169
1,381,495	68,646,221	0.0201
947,984	60,033,821	0.0158
789,196	57,148,400	0.0138
702,613	59,312,310	0.0118
	Chemical Units 1,349,410 741,768 985,999 1,182,724 1,171,657 1,381,495 947,984 789,196 702,613	ChemicalSystemUnitsDelivery1,349,41063,956,549741,76859,373,244985,99962,206,4201,182,72467,530,6801,171,65769,216,1081,381,49568,646,221947,98460,033,821789,19657,148,400702,61359,312,310

Pebble Lime

	Chemical	System	Chemical Units per System Delivery	
	Units	Delivery		
2002	32,349,396	63,956,549	0.5058	
2003	33,358,435	59,373,244	0.5618	
2004	31,078,350	62,206,420	0.4996	
2005	38,280,217	67,530,680	0.5669	
2006	38,189,332	69,216,108	0.5517	
2007	38,639,433	68,646,221	0.5629	
2008	33,510,283	60,033,821	0.5582	
2009	31,748,159	57,148,400	0.5555	
2010	34,482,329	59,312,310	0.5814	

Description	Amo	ount	Dis	allowed Doc Type	e Doc Number	Remark	Name	Explanation	Ad Ty
CORP-External A	\$	4,000	\$	(4,000) PS	42552269	Public Education Vid	Rivermiles LLC	Rivermiles public education video	Enviro
STLC-Admin & Ge	\$	3,612	\$	(3,612) PV	42612057	ACCT # J104439	St Louis Post Dispat	Watershed education ad St. Louis	Enviro
STLC-Admin & Ge	\$	70	\$	(70) CC	7174	ALICE ANN DETTMER	Alice A. Dettmer	Zvents watershed educ. Pgm ad	Enviro
STLC-Admin & Ge	\$	1,806	\$	(1,806) CC	7198	ALICE ANN DETTMER	Alice A. Dettmer	Watershed education ad St. Louis	Enviro
STJO-Admin & Ge	\$	190	\$	(190) PV	42532791	ID # 4192	Eagle Communications	30 sec. World Bird Community Prog Ad	Enviro
STJO-Admin & Ge	\$	298	\$	(298) PV	42532802	ID # 4192	Eagle Communications	30 sec. World Bird Community Prog Ad	Enviro
JOPL-Admin & Ge	\$	485	\$	(485) PS	42451213	TV Advertising	KODE TV 12	30 sec. World Bird Community Prog Ad	Enviro
JOPL-Admin & Ge	\$	125	\$	(125) PV	42502279	4-20-10 SERVICE	Sunrise Media Group	30 sec. World Bird Community Prog Ad	Enviro
JOPL-Admin & Ge	\$	242	\$	(242) PV	42502283	4-10 SERVICES	Zimmer Radio Group I	30 sec. World Bird Community Prog Ad	Enviro
JOPL-Admin & Ge	\$	375	\$	(375) PV	42502286	4-10 SERVICES	Zimmer Radio Group I	30 sec. World Bird Community Prog Ad	Enviro
JOPL-Admin & Ge	\$	730	\$	(730) PV	42502288	CONTRACT # 2980	KODE TV 12	30 sec. World Bird Community Prog Ad	Enviro
JOPL-Admin & Ge	\$	750	\$	(750) PV	42502291	CONTRACT # 2980	KODE TV 12	30 sec. World Bird Community Prog Ad	Enviro
JOPL-Admin & Ge	\$	615	\$	(615) PV	42502294	CONTRACT # 2981	KODE TV 12	30 sec. World Bird Community Prog Ad	Enviro
JOPL-Admin & Ge	\$	388	\$	(388) PV	42532808	ACCT # 10507	The Joplin Globe	Ad World Bird Community Prog Ad	Enviro
JOPL-Admin & Ge	\$	135	\$	(135) PV	42545568	CONTRACT # 2981	KODE TV 12	30 sec. World Bird Community Prog Ad	Enviro
JOPL-Admin & Ge	\$	20	\$	(20) PV	42545573	CONTRACT # 2980	KODE TV 12	30 sec. World Bird Community Prog Ad	Enviro
JOPL-Admin & Ge	\$	448	\$	(448) CC	7064	CHRISTIE L BARNHART	Christie L. Barnhart	Zimmer Radio Group	

Total

\$ 14,288

PJT-2 Page 1 of 5

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You're invited to free celebrations of water, watersheds and wild birds. Come see amazing birds of prey up-close and in-flight.

Thursday, May 6, 2:00 pm & 3:45 pm

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Advertisement: Thirty Second Spot for World Bird Sanctuary's Free Community Program

Birds of Prey

Aired on KODE, KSN and Zimmer Radio Group.

DO YOU HEAR THE CALL OF THE WILD?

MISSOURI AMERICAN WATER IN COOPERATION WITH KSN AND KODE TV PRESENTS THE WORLD BIRD SANCTUARY'S LIVE BIRDS OF PREY PROGRAM AT JOPLIN'S MEMORIAL HALL THURSDAY SEPTEMBER 3RD AT 6:30 PM. COME AND LEARN ABOUT RAPTORS INCLUDING EAGLES, OWLS, HAWKS, FALCONS AND MORE. WITNESS THE MAGIC OF THESE CREATURES IN FLIGHT. THIS SHOW IS FREE AND OPEN TO THE PUBLIC. ANSWER THE CALL OF THE WILD BROUGHT TO YOU BY MISSOURI AMERICAN WATER, KSN AND KODE TV. FOR MORE INFORMATION GO TO WWW.MISSOURIAMWATER.COM Advertisement: Thirty Second Spot for World Bird Sanctuary's Free Community Program

Birds of Prey

Aired on Eagle Radio

DO YOU HEAR THE CALL OF THE WILD?

MISSOURI AMERICAN WATER PRESENTS THE WORLD BIRD SANCTUARY'S LIVE BIRDS OF PREY PROGRAM AT THE RIVERSIDE CHURCH AUDITORIUM IN ST. JOSEPH ON TUESDAY, MAY 4TH AT 6:30 PM. COME AND LEARN ABOUT RAPTORS INCLUDING EAGLES, OWLS, HAWKS, FALCONS AND MORE. WITNESS THE MAGIC OF THESE CREATURES IN FLIGHT. THIS SHOW IS FREE AND OPEN TO THE PUBLIC. ANSWER THE CALL OF THE WILD BROUGHT TO YOU BY MISSOURI AMERICAN WATER. FOR MORE INFORMATION GO TO WWW.MISSOURIAMWATER.COM The Rivermiles Public Education Video is available for review at the Data Center of the Missouri Public Service Commission office.

District	<u>Account</u>	<u>Amount</u>		Organization	Benefit to Company	Benefit to Ratepayer
170122	170122.575140.16	\$	500	Missouri Chamber of Commerce	Economic Development Partnership	Joint-effort to bring business and industry to improve the local economy and ultimately reduce rate increases
170122	170122.575740.16	\$	1,000	Missouri Chamber of Commerce	Economic Development Partnership	Joint-effort to bring business and industry to improve the local economy and ultimately reduce rate increases
170122	170122.575280.16	\$	7,835	Missouri Chamber of Commerce	Dues - Economic Development Partnerships	Joint-effort to bring business and industry to improve the local economy and ultimately reduce rate increases
170122	170122.575281.16	\$	2,200	Missouri Chamber of Commerce	Dues - Economic Development Partnerships	Joint-effort to bring business and industry to improve the local economy and ultimately reduce rate increases
	Total	\$	11,535			

Water Bottle Pollution Facts

by Suzanna Didier, Demand Media



Over 80 percent of empty water bottles end up in the nation's landfills

Related Articles

Factories' Pollution & Other Causes of Global Warming

How to Compost in a Bottle

What Causes Pollution That Leads to Global Warming?

What Can You Do to Reduce Pollution and Conserve Energy?

The Best Natural Way to Clean **Baby Bottles**

How Do I Use Solar Power to Purify Water?

Share	In 1976 Americans drank an average of 1.6 gallons of bottled water every year.
Facebook	Roughly 30 years later consumption increased to 30 gallons per person, according to the Earth Policy Institute despite the fact that bottled water can
💌 Twitter	cost anywhere from 240 to 10,000 times more than tap water, which is brought right to your home for pennies a gallon. Bottled water also creates its own share
🚮 Google Buzz	of pollution the production of plastic bottles requires millions of barrels of oil per vear and the transportation of bottled water from its source to stores
Digg	releases thousands of tons of carbon dioxide. (See References 1)
র্ব্য StumbleUpon	Oil Consumption
Send to a Friend	According to "National Geographic," Americans drink more bottled water than any other nation, purchasing an impressive 29 billion bottles every year. Making
More »	all the plastic for those bottles uses 17 million barrels of crude oil annually. That

g at is equivalent to the fuel needed to keep 1 million vehicles on the road for 12 months. If you were to fill one quarter of a plastic water bottle with oil, you would

be looking at roughly the amount used to produce that bottle. (See References 2)

Recycling

The recycling rate for those 29 billion bottles of water is low; only about 13 percent end up in the recycling stream where they are turned into products like fleece clothing, carpeting, decking, playground equipment and new containers and bottles. In 2005, that meant approximately 2 million tons of water bottles ended up in U.S. landfills, according to the National Resources Defense Council (NRDC) (see References 3, Question 7). Plastic bottles take centuries to decompose and if they are incinerated, toxic byproducts, such as chlorine gas and ash containing heavy metals, are released into the atmosphere.

Transportation

Bottled water often takes a long journey to U.S. markets. In 2006, the equivalent of 2 billion half-liter bottles arrived in U.S. ports, according to the NRDC. Fiji shipped 18 million gallons of bottled water to California, releasing about 2,500 tons of transportation-related pollution. Western Europe's shipment of bottled water to New York City that year released 3,800 tons of pollution. (See References 3, Question 7) The Earth Policy Institute estimates that the energy used to pump, process, transport and refrigerate bottled water is over 50 million barrels of oil annually (see References 4).

Contaminants

Bottled water isn't always as safe as tap water. The NRDC conducted a four-year study of the bottled water industry and concluded that while most bottled water is safe to drink, there are areas of concern. Roughly 22 percent of the water tested contained contaminant levels that exceeded strict state health limits. One study found that hormone-disrupting phthalates had leached into bottled water that had been stored for 10 weeks. (See References 3, Questions 2 & 3)

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About the Author

Suzanna Didier's work appears in various online publications, including the National Geographic website and Local.com. She lives on a hobby farm, direct-markets her organic produce to local restaurants and has taught at the preschool, elementary and college levels. Didier holds a Master of Arts in education from the University of Oregon.

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Description	Obj Acct	G/L Date	Amount	Doc Type	Doc Number Remark	Name	Explanation
CORP-External A	575220	12/27/2010	\$ 13,446	PV	42683275 CUST # 116783	Axis Enterprises Inc	Logo water bottles
STJO-Admin & Ge	575220	9/7/2010	\$ 718	PV	42593034 SALES ORDER # 1	Identity Links Inc	Water bottles - Cancer walk

Total \$ 14,164