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AZ CORP COMMISSION
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COMMISSIONERS
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IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP., AN ARIZONA CORPORATION, FOR AUTHORITY TO ISSUE EVIDENCE OF INDEBTEDNESS IN AN AMOUNT NOT TO EXCEED $3,400,000.	DOCKET NO. SW-02361A-15-0206
IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS WASTEWATER RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.	DOCKET NO. SW-02361A-15-0207 **STAFF'S NOTICE OF FILING DIRECT TESTIMONY REGARDING RATE DESIGN AND COST OF SERVICE**

The Utilities Division ("Staff") of the Arizona Corporation Commission ("Commission") hereby files the Direct Testimony regarding Rate Design of Staff witnesses James R. Armstrong and Crystal S. Brown; and the Direct Testimony regarding Cost of Service of witness Dorothy Hains, P.E., in the above-captioned matter.

RESPECTFULLY SUBMITTED this 16th day of December, 2015.

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Attorneys, Legal Division
Arizona Corporation Commission
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Original and thirteen (13) copies of the foregoing filed this 16th day of December, 2015 with:

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Arizona Corporation Commission
DOCKETED
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BEFORE THE ARIZONA CORPORATION COMMISSION

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BOB STUMP
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BOB BURNS
Commissioner
DOUG LITTLE
Commissioner
TOM FORESE
Commissioner

IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP., AN ARIZONA CORPORATION, FOR AUTHORITY TO ISSUE EVIDENCE OF INDEBTEDNESS IN AN AMOUNT NOT TO EXCEED $3,400,000.	)	DOCKET NO. SW-02361A-15-0206
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TESTIMONY OF

JAMES R. ARMSTRONG

CHIEF ACCOUNTANT

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

DECEMBER 16, 2015

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EXHIBITS

EXECUTIVE SUMMARY
LIBERTY UTILITIES (BLACK MOUNTAIN SEWER), CORP.
DOCKET NOS. SW-02361A-15-0206 SW-02361A-15-0207

This testimony supports Staff's recommendations regarding the East Boulders Wastewater Treatment Plant (the "Plant") Closure Step Surcharges advocated by Liberty Black Mountain Sewer Corp. ("Liberty" or the "Company"), and the other parties to a Proposed Settlement Agreement (the "Settlement Agreement") filed with the Commission on November 17, 2015 in Liberty Docket Nos. SW-02361A-15-0206 and SW-02361A-15-0207.

The Settlement Agreement addresses three separate plant closure cost-related surcharges, as well as several other plant closure considerations that will require future Commission action. Staff's specific recommendations relate to the Step One and Step Two plant closure cost recoveries.

Although Staff was not a party to the Settlement Agreement, Staff is supportive of the Settlement Agreement. However, Staff is recommending an alternative approach to recovering the plant closure costs related to the Company's proposed Step One surcharge. Staff's approach would provide for full recovery of the underlying costs, plus appropriate carrying costs, but recoveries would occur over a four year period. In addition, Staff recommends the frame work for recovery of the Step Two surcharge.

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is James R. Armstrong. I am employed as the Chief Accountant of the Finance & Regulatory Analysis Section of the Utilities Division ("Staff"), of the Arizona Corporation Commission (the "ACC"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Mr. Armstrong, please provide an overview of your education and work experience.

A. I hold a Master Degree with a concentration in Accounting and a Bachelor Degree with a concentration in Finance, both received from Kansas State University. I have earned the distinction of being a Certified Public Accountant ("CPA"), though I do not practice as a CPA. I have worked in the area of utility regulation for over 30 years. Approximately 12 years of this time was spent as the Rate Manager and/or as the Manager of Financial Planning for Oklahoma Natural Gas Company. I've also served in various capacities for the Kansas Corporation Commission, the Oklahoma Corporation Commission, and the Residential Utility Consumer Office in Arizona. I began my current employment with the ACC in September of 2012.

SCOPE OF TESTIMONY

Q. What is the purpose of Staff's testimony?

A. This testimony supports Staff's recommendations regarding the East Boulders Wastewater Treatment Plant (the "Plant") Closure Step One Surcharge (the "Step One Surcharge") advocated by Liberty Black Mountain Sewer Corp. ("Liberty" or the "Company"), and the other parties[1] to a Proposed Settlement Agreement (the "Settlement Agreement") filed with the Commission on November 17, 2015 in Liberty Docket Nos. 15-0206 and 15-0207.

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[1] The other parties to this Proposed Settlement agreement are the Town of Carefree, CP Boulders, LLC dba Boulders Resort, Wind P1 Mortgage Borrower, LLC, and the Boulders Homeowners Association.

Staff's testimony also addresses the general framework for the Company's Plant Closure Step Two Surcharge, which will be implemented at a future date based on the general framework outlined in this testimony. Staff will address the Company's proposed Step 3 Surcharge once the Company provides detailed support for this in its rebuttal testimony.

Q. Does Staff support the Settlement Agreement?

A. Yes, Staff supports the Proposed Settlement Agreement and believes it is in the public interest. Staff does have recommendations regarding the structure of the Step One surcharge and also regarding the level of plant closure costs to be targeted for recovery under the Step One Surcharge.

LIBERTY BLACK MOUNTAIN SEWER – PLANT CLOSURE SURCHARGE PROPOSAL

Q. Please provide an overview of the Liberty Black Mountain Sewer plant closure surcharge proposal as discussed in the Company's rate application.

A. Very briefly, the Company broke down the aggregate plant closure cost estimates into three elements, and proposed separate cost recovery surcharges as the means of facilitating the plant closure cost recoveries from ratepayers. The first element of plant closure costs totaled $1,120,403 and represented costs already incurred. The second and third cost elements total $1,200,000 and $2,699,700 respectively and these elements represent cost expected to be incurred in the future.

Q. Since filing the rate application, has the Company entered into a Settlement Agreement that has changed the Plant Closure Cost recovery requested by the Company in its direct testimony?

A. Yes. On November 16, 2015, Liberty filed a Proposed Settlement Agreement (the "Settlement Agreement") with the Commission that reflects the intent of Liberty Black Mountain, the Town of Carefree, CP Boulders, LLC, Wind P1 Mortgage Brower LLC, and the Boulders Homeowners Association to settle and compromise: (1) litigation arising out of the Commission's Phase 2 Decision, (2) potential claims related to the Phase 1 and Phase 2 decisions, and (3) relief sought by Liberty Black Mountain in the instant case related to the closure of the East Boulders Wastewater Treatment Plant and recovery of closure costs.

Within, or otherwise accompanying this Settlement Agreement, the Company revised its original Step One closure cost element to reflect and capture $12,677 in additional costs, and to eliminate $308,000 in litigation costs that the signatories to the Settlement Agreement now propose **not** to include in the Step One surcharge billing rate calculation.

Q. Have you had an opportunity to review the Settlement Agreement?

A. Yes.

Q. Has the Company filed testimony in support of the Settlement Agreement?

A. No. However, it is Staff's understanding the Company will file testimony addressing the Settlement Agreement as part of its rebuttal testimony.

Q. Will Staff revisit its proposal once it has had an opportunity to review the Company's rebuttal testimony?

A. Yes.

Q. Is there a section in the Settlement Agreement that addresses recovery of the plant closure costs?

A. Yes. Section 2.2 addresses recovery of plant closure costs.

Q. Can you briefly discuss sections 2.2.1 etc.?

A. Yes.

2.2 Recovery of Plant Closure Costs.

2.2.1 The Signatories acknowledge that the Commission approved a Plant closure cost surcharge mechanism in the Phase 1 Decision, however, the Signatories further acknowledge and agree that certain modifications to the prior relief approved by the Commission are necessary and reasonable as some circumstances have changed beyond Liberty Black Mountain's control since the Phase 1 and Phase 2 Decisions were issued.

2.2.2 The Signatories agree that the Plant closure costs should be recovered using a staged surcharge approach as follows:

2.2.2.1 **Stage 1 Surcharge.** A Stage 1 Surcharge estimated at $6.31 per customer per month for recovery of Liberty Black Mountain's $825.080.51 of closure costs already incurred pursuant to Section 2.1.4 herein, subject to the provisions above and as requested in the 2015 Rate Case. The first stage of the Plant recovery cost surcharge will go into effect with the new rates approved in the pending Rate Case.

2.2.2.2 **Stage 2 Surcharge.** A Stage 2 Surcharge of $7.96 per month, brings the total estimated Stage 1 and Stage 2 surcharge cost to $14.27 per customer per month. The Stage 2 Surcharge will go into effect within 90 days of Liberty Black Mountain's payment of up to $1,200,000 to the City of Scottsdale.

2.2.2.3 **<u>Stage 3 Surcharge.</u>** A Stage 3 Surcharge estimated to be an additional $16.70 per month, bringing the total of the estimated Stage 1-3 surcharges to $30.97. That Stage 3 Surcharge is based on estimated costs of closure of the Plant, exclusive of the replacement capacity cost, equal to $2,699,700 as discussed above in Section 2.1.6. The Stage 3 surcharge would go into effect within 90 days of the Plant being closed on November 30, 2018.

Q. Is Staff recommending approval of the surcharges as proposed in the Settlement Agreement?

A. No. Staff is recommending an alternative approach to recovering the plant closure costs related to the Company's proposed Step One Surcharge.

STAFF RECOMMENDATIONS REGARDING THE COMPANY'S STEP ONE SURCHARGE PROPOSAL

Q. Does Staff agree with the use of 3 steps for recovery of plant closure costs?

A. Yes, Staff agrees with the use of 3 steps, but Staff recommendations differ in some respects regarding the dollar amounts recovered, and the period of time for recovery for Step One.

Q. Please explain the differences between the Company's proposed costs and Staff's recommendations.

A. The Company's original request was to seek recovery of $1,122,403.31 in Stage One plant closure costs. The following is a breakdown of these costs:

Description	**Amounts**
Capitalized Overheads	$ 105,017.80
Capitalized AFUDC	$ 75,459.26

Capitalized Direct Labor	$ 2,496.08
Engineering	$ 267,446.02
Legal	$ 669,984.15
Total	$ 1,120,403.31

At the time of the filing of the Settlement Agreement, the targeted level of Step One recoveries was modified to reflect recognition of $12,266.20 in additional costs and also to recognize the removal of $308,000 in costs that, pursuant to the provisions of the Settlement Agreement, are not now going to be addressed through the Step One surcharge. The total currently being targeted for recovery through the Company's proposed Step One surcharge is $825,081.

Staff believes that the $308,000 reduction in Step One closure cost recoveries, discussed immediately above, reflects the earnestness of the efforts undertaken by the Signatories in reaching the terms of the Settlement Agreement. However, Staff believes that recognition of further reductions is reasonable. The further reductions recommended by Staff total $56,857 and would bring targeted plant closure costs for the Step One surcharge down to $768,224 from the $825,081 in such costs advocated for recovery by the Company.

Q. Please explain the basis for the $56,857 in cost reductions recommended by Staff.

A. As previously noted, the Company accrued both an Allowance for Funds Used During Construction ("AFUDC) element of $75,459, and Capitalized Overheads of $105,018, within its Step One plant closure cost figure of $1,133,081. Staff recommends reducing both of these cost elements by approximately 31.5 percent (each) to effectively "step down" the level of such costs so as to align with the $308,000 in other cost reductions agreed to by the Signatories to the Settlement Agreement. As a result, Staff's Step One closure cost recovery recommendation is designed around a net closure cost to be recovered of $768,224, as previously noted.

Q. So are the recorded AFUDC and Construction Overheads generally a function of underlying construction expenditures?

A. Yes. So reductions in these underlying costs (as agreed to by the Settlement Agreement signatories) should also drive a reduction in the level of previously recorded AFUDC and Construction Overheads.

Q. Is it unusual to make adjustments to the level of AFUDC and Capitalized overheads previously recorded?

A. No it is not. In fact, in response to an informal Staff Data Request, the Company acknowledges that it had recorded such adjustments within its own calculations.

Q. Did Staff undertake a detailed assessment of the Company's initial AFUDC and Capitalized Overhead calculations?

A. No. However, for sake of issue processing efficiency, Staff is accepting the reasonableness of the Company's initial calculations, but for the specific modifications being made in my testimony.

Q. Please continue explaining the structure of Staff's Step One surcharge recommendation, using the assumption that the level of plant closure costs to be recovered is $768,224.

A. Staff recommends that the Liberty plant closure Step One surcharge be **calculated assuming a four year recovery period**. Using the ROR of 7.08 percent advocated by Staff in the underlying Liberty rate case, capturing the applicable tax gross-up factor, and assuming that the surcharge will be billed to 2,052 ratepayers, Staff's recommended Step One surcharge would be **$9.74 per month for all four years of the Step One surcharge.**[2]

Staff's recommended approach to calculating the Step One surcharge would result in very favorable benefits for ratepayers and the public in general. The total carrying cost[3] associated with Staff's recommendation is reduced to $191,323 from the estimate of $1,198,569 derived from the proposal advocated by the Company.

Q. Why was a four year surcharge period selected?

A. Assuming that the East Boulders Wastewater Treatment Plant closes in November of 2018 as currently expected, a four year period would take us through that date and also through the processing of the rate case expected to be filed by Liberty at the time the Plant is closed.

Q. Setting aside for a moment the differences in the level of Step One Plant closure costs advocated by Staff and by the Company, can you provide a general overview of the difference in the approaches being taken by Staff and the Company to address recovery of the Step One costs?

A. Yes. The Company's approach to the Step One cost recoveries would be to use a surcharge with monthly billing rates that would change each year the surcharge was in use, and while the Company has suggested that at some point these recoveries would be built into base rates, the general recovery timeframe for the Step One cost recoveries would be 20-years. Staff's recommended approach would be to set a billing rate that would remain constant for the full four year recovery period[4], much like the way a home mortgage payment is structured. At the end of the four year billing period, the underlying costs would be fully recovered and billing related to the Step One closure costs would cease.

[2] To the extent that the Commission's final Decision in the pending rate case identifies a different ROR, customer count, or net Step One plant closure cost, the Step One surcharge calculation would need to be updated accordingly.
[3] Carrying cost means the aggregate of the ROR as well as the tax gross-up recoveries.
[4] Final cost-recovery true-up would need to be incorporated.

STAFF RECOMMENDATIONS REGARDING THE STRUCTURE OF THE STEP TWO SURCHARGE RECOVERIES

Q. Please summarize the Step Two surcharge proposal identified in the Settlement Agreement.

A. As previously noted, the Step Two surcharge is discussed briefly in paragraph 2.2.2.2 of the Settlement Agreement. Basically, the Company's Step Two surcharge proposal is structured around an embedded cost of $1,200,000, a 20-year recovery period, and the same general ROR, tax gross up factor, and customer count used for the Step One surcharge rate calculation. As previously noted the estimated monthly billing rate calculated by the Company would be $7.96 for the first six months, with the rate increasing to $9.01 per month for the next 12 month billing period, and then the rate would be lowered slightly every 12 months thereafter.

It is Staff's understanding that the Surcharges would only remain in effect until the next rate case decision, and the Company is required to file a rate application in 2019 with a 2018 test year and be addressed in that case appropriately.

Q. What is Staff's recommendation regarding the Step Two plant closure proposal requested by the Company?

A. Staff reserves the right to make further recommendations at the proper time regarding whether or not the Step Two cost recoveries should be included in rates or continue to be billed to customers in a transparent separate surcharge. However, Staff believes that Commission authorization in this docket for Liberty to utilize a second plant closure surcharge would be reasonable, while also assuring that the Step Two cost recoveries can start with only limited delay once the Plant has actually been closed. I will discuss the Staff recommended accelerated review of the Step Two surcharge rate calculation later in my surrebuttal testimony.

Q. Is Staff recommending that all recoveries from all authorized plant closure surcharges be subject to true-up?

A. Yes.

STAFF COMMENTS REGARDING THE FUTURE STEP THREE SURCHARGE

Q. Does Staff wish to share any preliminary comments regarding the eventual recovery of the Step Three plant closure recoveries?

A. Yes. First, Staff acknowledges that Liberty will be incurring additional plant closure costs that will need to be passed through to customers in a reasonable manner and over a reasonable time period. Staff will evaluate closely the Company's ultimate cost recovery proposal and make specific recommendations at the appropriate time.

Staff will be making its recommendations regarding the Step Three Surcharge after the Company files detailed support for this third surcharge as a part of its rebuttal case.

Q. Are the other sections in the Settlement Agreement that Staff would like to address?

A. Yes, section 2.4.4 address sale of the plant site. Staff understands and recommends that sales proceeds from the plant site shall be split 50/50 between the ratepayers and the Company.

Q. Does this conclude your Liberty Black Mountain Plant Closure Cost direct testimony?

A. Yes, however Staff reserves the right to modify its recommendations based on future filings by the other parties.

Armstrong

Liberty Black Mountain Step One Surcharge

Schedules JRA-1 – Description of Contents

Page 1 of 3 Development of Staff recommended Step One plant closure cost recoveries amounting to $768,224.

Page 2 of 3 Development of Staff's Step One Surcharge Monthly Billing Rate of $9.74. Column A – shows financial results using the Company's Step One surcharge calculation approach, but assuming that the Commission accept Staff's Step One cost recoveries of $768,224, and Staff's advocated ROR of 7.08%. The resulting initial surcharge billing rate would be $5.10 per month, whereas the Company's proposed initial monthly billing rate is $6.31, as shown in Staff Schedules JRA-2. Total recoveries under the Company's approach would occur over a 20-year period. Line 15, column G, shows Staff advocated monthly billing rate of $9.74 using a four year recovery period. Columns C, D, E, F, and H show monthly billing rates over the time periods shown on line 8 of these same columns.

Page 3 of 3 Shows development of Staff's recommended 7.08% ROR.

Boulders WWTP Closure Costs

Line No.	Description		Amount
1	Capitalized Overhead	$	105,018
2	Capitalized AFUDC	$	75,459
3	Capitalized Direct Labor	$	2,496
4	Engineering	$	267,446
5	Legal	$	669,984
6	**Total**	$	**1,120,403**
7	Other Additional	$	12,677
8	Other Reductions - Legal	$	(108,000)
9	AFUDC	$	(23,772)
10	Overheads	$	(33,084)
11	Direct Labor	$	-
12		$	968,224
13	Other Reductions - Legal	$	(200,000)
14	**Staff Plant Closure Costs**	$	768,224

Liberty - Black Mountain Sewer
Docket Nos 15-0206 and 15-0207

Staff Surcharge Step One
Schedule JRA-1
Page 2 of 3

Step One Surcharge Rate Calculation

Line			A	B	C	D	E	F	G	H
1	Plant Closure Costs to date		$768,224							
	Less:									
2	Gain on Sale of Land (assume land not sold at time of implementation)	0								
3	Share %	50%								
4	Net Plant Closure Costs		0							
5			$768,224	w/tax						
6	Cost of Capital		7.08%	11.36%						
	Step 1 Compute the Annual Amortization					Alternative Surcharge Period Alternatives				
7	Net Plant Closure costs (from Step 1)		$768,224	years			years			years
8	(*) Amortization rate (assuming 20 years)		5%	20	$768,224	15	10	5	[illegible]	20
9	(=) Equals Annual Amortization		$38,411							
	Step 2 Compute the Annual Return on Investment									
10	Net Plant Closure costs (from Step 1)		$768,224							
11	Less: Prior Years Amortizaiton		0							
12	Total Cost		$768,224							Company
13	(*) Cost of Capital		7.08%							
14	(=) Equals Annual Return on Investment		$54,383							
15				Indicated - Monthly Surcharge		$ 4.34	$ 5.23	$ 8.21	$ 9.74	$ 3.96
	Step 3 Compute the Gross Revenue Conversion Factor (GRCF)									
16	GRFC (from most recent rate case)		1.6051							
17	Step 4 Find the Incremental Income Tax Factor				Total Paid	$ 1,603,284	$ 1,288,849	$ 1,010,529	$ 959,547	$ 1,948,741
18	Incremental Income Tax Factor (GRCF - 1)		0.6051							
19					Original Investmet	768,224	768,224	768,224	768,224	768,224
20	Step 5 Find the Annual Income Tax Component of the Cost Recovery Surcharge									
21	Revenue			Staff Approac ROR w/tax		$ 835,060	$ 520,625	$ 242,305	$ 191,323	$ 1,180,517
22	Incremental Income Tax Conversion		0.6051							
23	(*) Times Annual Return on Investment		$54,383							
24	(=) Equals Annual Income Tax Component of Annual Cost Recovery Surcharge		$32,905							
	Step 6 Find the Amortization and Return on Investment of the Annual Surcharge Revenue (before Income Taxes)									
25	Annual Return on Investment (from Step 2)		$54,383							
26	(+) Plus Annual Amortization (from Step 1)		$38,411							
27	(=) Equals Annual Cost Recovery Surcharge Revenue before income taxes		$92,794							
	Step 7 Find the Total Annual Cost Recovery Surcharge Revenue Requirement (with									
28	Income Taxes)									
29	Annual Income Tax Component of the Surcharge Revenue (from Step 5)		$32,905							
30	(+) Plus Annual Amortization and Return on Investment Component of the Surcharge		$92,794							
31	Revenue (from Step 6)		$125,698							
32	(=) Equals the Total Annual Surcharge Revenue Requirement									
33	Step 8 Find the Monthly Surcharge per Customer									
34	Total Annual Cost Recovery Surcharge Revenue Requirement (from Step 7)		$125,698							
35	(/) Divide by 12		12							
36	(=) Equals Total Monthly Surcharge Revenue Requirement		$10,475							
37	(/) Divided by Number of Customers at time of filing (assumes test year end number		2,052							
38	of customers)									
39	(=) Equals the Monthly Surcharge per Customer		$5.10							
40										

Liberty - Black Mountain Sewer
Docket Nos 15-0206 and 15-0207

Line	ROR Development	A	B	C
	Company			
1	Long-Term Debt	30.00%	3.53%	1.06%
2	Equity	70.00%	10.80%	7.56%
3	Total Cost-of Capital/ROR	100.00%		8.62%
	Staff - Cost-of-Capital Recommendation			
4	Long-Term Debt	30.00%	3.53%	1.06%
5	Equity	70.00%	8.60%	6.02%
6	Total Cost-of Capital/ROR	100.00%		7.08%

Armstrong

Liberty Black Mountain

Schedules JRA-2

For general reference purposes, this attachment contains a copy of the Company supplied workpapers for its proposed Step One, Step Two, and Step Three plant closure cost surcharges.

Liberty Utilities (Black Mountain Sewer) Corp.
Modified Plant Closure Surcharge Computation - Stage 1
Year 1

Exhibit
Page 1

Schedule JRA-2
Copy of Company
Provided Workpapers

	Plant Close Cost to be Recovered per Jay	$	825,081
Step 1	Compute the Annual Amortization		
	Net Plant Closure Costs (from Step 1)	$	825,081
	(*) Amortization rate (assuming 20 years)		5%
	(=) Equals Annual Amortization	$	41,254
Step 2	Compute the Annual Return on Investment		
	Net Plant Closure Costs (from Step 1)	$	825,081
	Less: Prior Years Amortization		-
	Total Cost	$	825,081
	(*) Cost of Capital		8.62%
	(=) Equals Annual Return on Investment	$	71,114

Step 3 Compute the Gross Revenue Conversion Factor (GRCF)

GRCF (from most recent rate case) $= \frac{1}{1 - 0.37697} =$ 1.6050

Step 4 Find the Incremental Income Tax Factor

Incremental Income Tax Factor = GRCF - 1

= 1.6050 - 1

= 0.6050

Step 5	Find the Annual Income Tax Component of the Cost Recovery Surcharge Revenue		
	Incremental Income Tax Conversion Factor		0.6050
	(*) Times Annual Return on Investment	$	71,114
	(=) Equals Annual Income Tax Component of Annual Cost Recovery Surcharge	$	43,024
Step 6	Find the Amortization and Return on Investment of the Annual Surcharge Revenue (before Income Taxes)		
	Annual Return on Investment (from Step 2)	$	71,114
	(+) Plus Annual Amortization (from Step 1)	$	41,254
	(=) Equals Annual Cost Recovery Surcharge Revenue before Income taxes	$	112,368
Step 7	Find the Total Annual Cost Recovery Surcharge Revenue Requirement (with Income Taxes)		
	Annual Income Tax Component of the Surcharge Revenue (from Step 5)	$	43,024
	(+) Plus Annual Amortization and Return on Investment Component of the Surcharge Revenue (from Step 6)	$	112,368
	(=) Equals the Total Annual Surcharge Revenue Requirement	$	155,391
Step 8	Find the Monthly Surcharge per Customer		
	Total Annual Cost Recovery Surcharge Revenue Requirement (from Step 7)	$	155,391
	(/) Divided by 12		12
	(=) Equals Total Monthly Surcharge Revenue Requirement	$	12,949
	(/) Divided by Number of Customers at time of filing (assumes test year end nuber of customers)		2,052
	(=) Equals the Monthly Surcharge per Customer	$	6.31

Liberty Utilities (Black Mountain Sewer) Corp.
Schedule of Modified Plant Closure Surcharge - Stage 1 for Years 1 through 21

Line No.		Year 1	2	3	4	5	6	7	8	9	10
1	Beg Balance	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081
2	Accumulated Amortization		$ (41,254)	$ (82,508)	$ (123,762)	$ (165,016)	$ (206,270)	$ (247,524)	$ (288,778)	$ (330,032)	$ (371,286)
3	Ending Balance (ln. 1 + Ln. 2)	$ 825,081	$ 783,826	$ 742,572	$ 701,318	$ 660,064	$ 618,810	$ 577,556	$ 536,302	$ 495,048	$ 453,794
4	Return %	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%
5	Return $'s (ln. 3 x ln. 4)	$ 71,114	$ 67,566	$ 64,010	$ 60,454	$ 56,898	$ 53,341	$ 49,785	$ 46,229	$ 42,673	$ 39,117
6	Incremental Income Tax Conversion Factor	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605
7	Annual Income Tax Component of Annual Cost Recovery Surcharge (ln. 5 x ln. 6)	$ 43,024	$ 40,877	$ 38,726	$ 36,574	$ 34,423	$ 32,272	$ 30,120	$ 27,969	$ 25,817	$ 23,666
8	Annual Amortization	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254
9	Total Annual Cost Recovery (ln. 5 + ln. 7 + ln. 8)	$ 155,391	$ 149,697	$ 143,990	$ 138,282	$ 132,575	$ 126,867	$ 121,160	$ 115,452	$ 109,744	$ 104,037
10	Number of YE Customers	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052
11	Annual Surcharge per Customer (ln. 9 / ln. 10)	$ 75.73	$ 72.95	$ 70.17	$ 67.39	$ 64.61	$ 61.83	$ 59.04	$ 56.26	$ 53.48	$ 50.70
12	Monthly Surcharge per Customer (ln. 11 / 12)	$ 6.31	$ 6.08	$ 5.85	$ 5.62	$ 5.38	$ 5.15	$ 4.92	$ 4.69	$ 4.46	$ 4.23

Line No.		Year 11	12	13	14	15	16	17	18	19	20	21
1	Beg Balance	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081	$ 825,081
2	Accumulated Amortization	$ (412,540)	$ (453,794)	$ (495,048)	$ (536,302)	$ (577,556)	$ (618,810)	$ (660,064)	$ (701,318)	$ (742,572)	$ (783,826)	$ (825,081)
3	Ending Balance (ln. 1 + Ln. 2)	$ 412,540	$ 371,286	$ 330,032	$ 288,778	$ 247,524	$ 206,270	$ 165,016	$ 123,762	$ 82,508	$ 41,254	$ -
4	Return %	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%
5	Return $'s (ln. 3 x ln. 4)	$ 35,561	$ 32,005	$ 28,449	$ 24,893	$ 21,337	$ 17,780	$ 14,224	$ 10,668	$ 7,112	$ 3,556	$ -
6	Incremental Income Tax Conversion Factor	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605
7	Annual Income Tax Component of Annual Cost Recovery Surcharge (ln. 5 x ln. 6)	$ 21,514	$ 19,363	$ 17,212	$ 15,060	$ 12,909	$ 10,757	$ 8,606	$ 6,454	$ 4,303	$ 2,151	$ -
8	Annual Amortization	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254	$ 41,254
9	Total Annual Cost Recovery (ln. 5 + ln. 7 + ln. 8)	$ 98,329	$ 92,622	$ 86,914	$ 81,207	$ 75,499	$ 69,792	$ 64,084	$ 58,377	$ 52,669	$ 46,962	$ 41,254
10	Number of YE Customers	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052
11	Annual Surcharge per Customer (ln. 9 / ln. 10)	$ 47.92	$ 45.14	$ 42.36	$ 39.57	$ 36.79	$ 34.01	$ 31.23	$ 28.45	$ 25.67	$ 22.89	$ 20.10
12	Monthly Surcharge per Customer (ln. 11 / 12)	$ 3.99	$ 3.76	$ 3.53	$ 3.30	$ 3.07	$ 2.83	$ 2.60	$ 2.37	$ 2.14	$ 1.91	$ 1.68

Liberty Utilities (Black Mountain Sewer) Corp.
Computation of Required Change in Effluent Rate

Line No.			
1	Total Amount to be Recovered from Effluent Sales (Boulders Resort Legal Challenge)	$	-
2	Estimated Number of Full Months to Recover (Estimated Recovery Period From June 1, 2016 to Nov. 20, 2018)		30
3	Average Amount Outsanding Over Recovery Period	$	-
4	Annual Rate of Return		0.00%
5	Monthly Rate of Return (ln. 4 / 12)		0.00%
6	Monthly Revenues to Recover Cost (ln. 1 / ln. 2)	$	-
7	Total Return Component Over Recovery Period (ln. 2 x ln. 3 x ln. 5)	$	-
8	Monthly Return Component (ln. 7 / ln. 2)	$	-
9	Incremental Income Tax Conversion Factor		0.6050
10	Monthly Income Tax Component (ln. 8 x ln. 9)	$	-
11	Required Increase in Monthly Revenues (ln. 6 + ln. 8 + ln. 10))	$	-
12	Test Year Monthly Average Revenues from Effluent Sales	$	1,339
13	Total Monthly Revenues to be Recovered from Effluent Sales (ln. 11 + ln. 12)	$	1,339
14	Test Year Gallons Sold (in 1,000s)		34,889
15	Average Monthly Gallons Sold (in 1,000s) (ln. 8 / 12)		2,907
16	Computed Rate Rate per 1,000 gallons (ln. 7 / ln. 9)	$	**0.460512**
17	Proposed Effluent Rate per 1,000 gallons in Current Rate Case	$	0.460512
18	Required Increase in Effluent Rate per 1,000 gallons (ln. 10 - ln. 11)	$	-
19	% Increase in Effluent Rate (ln. 12 / ln. 11 - 1)		-100%
20	Computed Rate Rate per Acre Foot (ln. 10 * 325.581)	$	**150.00**
21	Proposed Effluent Rate per Acre foot in Current Rate Case	$	150.00
22	Required Increase in Effluent Rate per Acre Foot (ln. 10 - ln. 11)	$	-
23	% Increase in Effluent Rate (ln. 16 / ln. 15 - 1)		-100%

Liberty Utilities (Black Mountain Sewer) Corp.
Computation of Required Change in Effluent Rate

Exhibit
Page 3

Line No.				
1	Total Amount to be Recovered from Effluent Sales (Boulders Resort Legal Challenge)	$	-	
2	Estimated Number of Full Months to Recover (Estimated Recovery Period From June 1, 2016 to Nov. 20, 2018)		20	25
3	Average Amount Outsanding Over Recovery Period	$	-	
4	Annual Rate of Return		0.00%	
5	Monthly Rate of Return (ln. 4 / 12)		0.00%	
6	Monthly Revenues to Recover Cost (ln. 1 / ln. 2)	$	-	
7	Total Return Component Over Recovery Period (ln. 2 x ln. 3 x ln. 5)	$	-	
8	Monthly Return Component (ln. 7 / ln. 2)	$	-	
9	Incremental Income Tax Conversion Factor		0.6050	
10	Monthly Income Tax Component (ln. 8 x ln. 9)	$	-	
11	Required Increase in Monthly Revenues (ln. 6 + ln. 8 + ln. 10))	$	-	
12	Test Year Monthly Average Revenues from Effluent Sales	$	1,339	
13	Total Monthly Revenues to be Recovered from Effluent Sales (ln. 11 + ln. 12)	$	1,339	
14	Test Year Gallons Sold (in 1,000s)		34,889	
15	Average Monthly Gallons Sold (in 1,000s) (ln. 8 / 12)		2,907	
16	Computed Rate Rate per 1,000 gallons (ln. 7 / ln. 9)	$	**0.460512**	
17	Proposed Effluent Rate per 1,000 gallons in Current Rate Case	$	0.460512	
18	Required Increase in Effluent Rate per 1,000 gallons (ln. 10 - ln. 11)	$	-	
19	% Increase in Effluent Rate (ln. 12 / ln. 11 - 1)		-100%	
20	Computed Rate Rate per Acre Foot (ln. 10 * 325.581)	$	**150.00**	
21	Proposed Effluent Rate per Acre foot in Current Rate Case	$	150.00	
22	Required Increase in Effluent Rate per Acre Foot (ln. 10 - ln. 11)	$	-	
23	% Increase in Effluent Rate (ln. 16 / ln. 15 - 1)		-100%	

Liberty Utilities (Black Mountain Sewer) Corp.
Additional Plant Capacity Surcharge Computation (Option 4)
Year 1

Exhibit
Page 4

Step 1 Compute the Annual Depreciation /Amortization Expense

Description	Plant Category	Cost	Depr/Amort Rate	Annual Depr Exp[1]
Capital Costs for New Capacity	Treament Plant	1,200,000	5.00%	30,000
Estimated Total Additional Plant Closure Costs		$ 1,200,000		$ 30,000

[1] Half-year Convention

Step 2 Compute the Annual Return on Investment

Estimated Total Additional Plant Closure Costs (from Step 1)	$ 1,200,000
Less: Prior Years Depreication/Amortization	-
Total Cost	$ 1,200,000
(*) Cost of Capital	8.62%
(=) Equals Annual Return on Investment	$ 103,428

Step 3 Compute the Gross Revenue Conversion Factor (GRCF)

GRCF (from most recent rate case) $= \dfrac{1}{1 - 0.37697} = 1.6050$

Step 4 Find the Incremental Income Tax Factor

Incremental Income Tax Factor = GRCF - 1

= 1.6050 - 1

= 0.6050

Step 5 Find the Annual Income Tax Component of the Cost Recovery Surcharge Revenue

Incremental Income Tax Conversion	0.6050
(*) Times Annual Return on Investment	$ 103,428
(=) Equals Annual Income Tax Component of Annual Cost Recovery Surcharge	$ 62,574

Step 6 Find the Amortization and Return on Investment of the Annual Surcharge Revenue (before Income Taxes)

Annual Return on Investment (from Step 2)	$ 103,428
(+) Plus Annual Depreciation/Amortization (from Step 1)	$ 30,000
(=) Equals Annual Cost Recovery Surcharge Revenue before income taxes	$ 133,428

Step 7 Find the Total Annual Cost Recovery Surcharge Revenue Requirement (with Income Taxes)

Annual Income Tax Component of the Surcharge Revenue (from Step 5)	$ 62,574
(+) Plus Annual Amortization and Return on Investment Component of the Surcharge Revenue (from Step 6)	$ 133,428
(=) Equals the Total Annual Surcharge Revenue Requirement	$ 196,002

Step 8 Find the Monthly Surcharge per Customer

Total Annual Cost Recovery Surcharge Revenue Requirement (from Step 7)	$ 196,002
(/) Divided by 12	12
(=) Equals Total Monthly Surcharge Revenue Requirement	$ 16,333
(/) Divided by Number of Customers at time of filing (assumes test year end nuber of customers)	2,052
(=) Equals the Monthly Surcharge per Customer	$ 7.96

Liberty Utilities (Black Mountain Sewer) Corp.
Schedule of Capacity Surcharge - Stage 2 for Years 1 through 22

Line No.		Year 1	2	3	4	5	6	7	8	9	10
1	Beg Balance	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000
2	Accumulated Amortization	$ -	$ (30,000)	$ (90,000)	$ (150,000)	$ (210,000)	$ (270,000)	$ (330,000)	$ (390,000)	$ (450,000)	$ (510,000)
3	Ending Balance (ln. 1 + Ln. 2)	$ 1,200,000	$ 1,170,000	$ 1,110,000	$ 1,050,000	$ 990,000	$ 930,000	$ 870,000	$ 810,000	$ 750,000	$ 690,000
4	Return %	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%
5	Return $'s (ln. 3 x ln. 4)	$ 103,428	$ 100,854	$ 95,682	$ 90,510	$ 85,338	$ 80,166	$ 74,994	$ 69,822	$ 64,650	$ 59,478
6	Incremental Income Tax Conversion Factor	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605
7	Annual Income Tax Component of Annual Cost Recovery Surcharge (ln. 5 x ln. 6)	$ 62,574	$ 61,017	$ 57,888	$ 54,759	$ 51,629	$ 48,500	$ 45,371	$ 42,242	$ 39,113	$ 35,984
8	Annual Amortization	$ 30,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000
9	Total Annual Cost Recovery (ln. 5 + ln. 7 + ln. 8)	$ 196,002	$ 221,871	$ 213,570	$ 205,269	$ 196,967	$ 188,666	$ 180,365	$ 172,064	$ 163,763	$ 155,462
10	Number of YE Customers	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052
11	Annual Surcharge per Customer (ln. 9 / ln. 10)	$ 95.52	$ 108.12	$ 104.08	$ 100.03	$ 95.99	$ 91.94	$ 87.90	$ 83.85	$ 79.81	$ 75.76
12	Monthly Surcharge per Customer (ln. 11 / 12)	$ 7.96	$ 9.01	$ 8.67	$ 8.34	$ 8.00	$ 7.66	$ 7.32	$ 6.99	$ 6.65	$ 6.31

Line No.		Year 12	13	14	15	16	17	18	19	20	21
1	Beg Balance	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000
2	Accumulated Amortization	$ (630,000)	$ (690,000)	$ (750,000)	$ (810,000)	$ (870,000)	$ (930,000)	$ (990,000)	$ (1,050,000)	$ (1,110,000)	$ (1,170,000)
3	Ending Balance (ln. 1 + Ln. 2)	$ 570,000	$ 510,000	$ 450,000	$ 390,000	$ 330,000	$ 270,000	$ 210,000	$ 150,000	$ 90,000	$ 30,000
4	Return %	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%
5	Return $'s (ln. 3 x ln. 4)	$ 49,134	$ 43,962	$ 38,790	$ 33,618	$ 28,446	$ 23,274	$ 18,102	$ 12,930	$ 7,758	$ 2,586
6	Incremental Income Tax Conversion Factor	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605
7	Annual Income Tax Component of Annual Cost Recovery Surcharge (ln. 5 x ln. 6)	$ 29,726	$ 26,597	$ 23,468	$ 20,339	$ 17,210	$ 14,081	$ 10,952	$ 7,823	$ 4,694	$ 1,565
8	Annual Amortization	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000
9	Total Annual Cost Recovery (ln. 5 + ln. 7 + ln. 8)	$ 138,860	$ 130,559	$ 122,258	$ 113,957	$ 105,656	$ 97,355	$ 89,054	$ 80,753	$ 72,452	$ 64,151
10	Number of YE Customers	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052
11	Annual Surcharge per Customer (ln. 9 / ln. 10)	$ 67.67	$ 63.63	$ 59.58	$ 55.53	$ 51.49	$ 47.44	$ 43.40	$ 39.35	$ 35.31	$ 31.26
12	Monthly Surcharge per Customer (ln. 11 / 12)	$ 5.64	$ 5.30	$ 4.96	$ 4.63	$ 4.29	$ 3.95	$ 3.62	$ 3.28	$ 2.94	$ 2.61

Liberty Utilities (Black Mountain Sewer) Corp.
Additional Plant Costs Surcharge Computation - Stage 3
Year 1

Step 1 Compute the Annual Depreciation /Amortization Expense

Description	Plant Category	Cost	Depr/Amort Rate	Annual Depr Exp[1]
Bypass sewers at WRF	Collection Mains	$ 240,800	2.00%	$ 2,408
Decommission and Remove WRF	Treament Plant	439,300	5.00%	10,983
Commercial LS Upgrading	Special Collecting Strructures	411,700	2.00%	4,117
New Force Mains	Collection Mains	990,900	2.00%	9,909
Pavement Replacement	Structures & Improvements	617,000	3.33%	10,273
Estimated Total Additional Plant Closure Costs		$ 2,699,700		$ 37,690

[1] Half-year Convention

Step 2 Compute the Annual Return on Investment

Estimated Total Additional Plant Closure Costs (from Step 1)	$ 2,699,700
Less: Prior Years Depreication/Amortization	-
Total Cost	$ 2,699,700
(*) Cost of Capital	8.62%
(=) Equals Annual Return on Investment	$ 232,687

Step 3 Compute the Gross Revenue Conversion Factor (GRCF)

GRCF (from most recent rate case) $= \frac{1}{1 - 0.37697} = 1.6050$

Step 4 Find the Incremental Income Tax Factor

Incremental Income Tax Factor = GRCF - 1

= 1.6050 - 1

= 0.6050

Step 5 Find the Annual Income Tax Component of the Cost Recovery Surcharge Revenue

Incremental Income Tax Conversion	0.6050
(*) Times Annual Return on Investment	$ 232,687
(=) Equals Annual Income Tax Component of Annual Cost Recovery Surcharge	$ 140,776

Step 6 Find the Amortization and Return on Investment of the Annual Surcharge Revenue (before Income Taxes)

Annual Return on Investment (from Step 2)	$ 232,687
(+) Plus Annual Depreciation/Amortization (from Step 1)	$ 37,690
(=) Equals Annual Cost Recovery Surcharge Revenue before income taxes	$ 270,377

Step 7 Find the Total Annual Cost Recovery Surcharge Revenue Requirement (with Income Taxes)

Annual Income Tax Component of the Surcharge Revenue (from Step 5)	$ 140,776
(+) Plus Annual Amortization and Return on Investment Component of the Surcharge Revenue (from Step 6)	$ 270,377
(=) Equals the Total Annual Surcharge Revenue Requirement	$ 411,152

Step 8 Find the Monthly Surcharge per Customer

Total Annual Cost Recovery Surcharge Revenue Requirement (from Step 7)	$ 411,152
(/) Divided by 12	12
(=) Equals Total Monthly Surcharge Revenue Requirement	$ 34,263
(/) Divided by Number of Customers at time of filing (assumes test year end nuber of customers)	2,052
(=) Equals the Monthly Surcharge per Customer	$ 16.70

Liberty Utilities (Black Mountain Sewer) Corp.
Schedule of Additional Plant Costs Surcharge - Stage 3 for Years 1 through 30

Line No.		Year 1	2	3	4	5	6	7	8	9	10
1	Beg Balance	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700
2	Accumulated Amortization	$ -	$ (37,690)	$ (113,069)	$ (188,448)	$ (263,827)	$ (339,206)	$ (414,585)	$ (489,964)	$ (565,343)	$ (640,722)
3	Ending Balance (ln. 1 + Ln. 2)	$ 2,699,700	$ 2,662,010	$ 2,586,631	$ 2,511,252	$ 2,435,873	$ 2,360,494	$ 2,285,115	$ 2,209,736	$ 2,134,357	$ 2,058,978
4	Return %	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%
5	Return $'s (ln. 3 x ln. 4)	$ 232,687	$ 229,465	$ 222,968	$ 216,470	$ 209,972	$ 203,475	$ 196,977	$ 190,479	$ 183,982	$ 177,484
6	Incremental Income Tax Conversion Factor	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605
7	Annual Income Tax Component of Annual Cost Recovery Surcharge (ln. 5 x ln. 6)	$ 140,776	$ 138,827	$ 134,895	$ 130,964	$ 127,033	$ 123,102	$ 119,171	$ 115,240	$ 111,309	$ 107,378
8	Annual Amortization	$ 37,690	$ 75,379	$ 75,379	$ 75,379	$ 75,379	$ 75,379	$ 75,379	$ 75,379	$ 75,379	$ 75,379
9	Total Annual Cost Recovery (ln. 5 + ln. 7 + ln. 8)	$ 411,152	$ 443,671	$ 433,242	$ 422,813	$ 412,385	$ 401,956	$ 391,527	$ 381,098	$ 370,669	$ 360,241
10	Number of YE Customers	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052
11	Annual Surcharge per Customer (ln. 9 / ln. 10)	$ 200.37	$ 216.21	$ 211.13	$ 206.05	$ 200.97	$ 195.88	$ 190.80	$ 185.72	$ 180.64	$ 175.56
12	Monthly Surcharge per Customer (ln. 11 / 12)	$ 16.70	$ 18.02	$ 17.59	$ 17.17	$ 16.75	$ 16.32	$ 15.90	$ 15.48	$ 15.05	$ 14.63

Line No.		Year 11	12	13	14	15	16	17	18	19	20
1	Beg Balance	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700
2	Accumulated Amortization	$ (716,101)	$ (791,481)	$ (866,860)	$ (942,239)	$ (1,017,618)	$ (1,092,997)	$ (1,168,376)	$ (1,243,755)	$ (1,319,134)	$ (1,394,513)
3	Ending Balance (ln. 1 + Ln. 2)	$ 1,983,599	$ 1,908,219	$ 1,832,840	$ 1,757,461	$ 1,682,082	$ 1,606,703	$ 1,531,324	$ 1,455,945	$ 1,380,566	$ 1,305,187
4	Return %	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%
5	Return $'s (ln. 3 x ln. 4)	$ 170,986	$ 164,489	$ 157,991	$ 151,493	$ 144,995	$ 138,498	$ 132,000	$ 125,502	$ 119,005	$ 112,507
6	Incremental Income Tax Conversion Factor	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605
7	Annual Income Tax Component of Annual Cost Recovery Surcharge (ln. 5 x ln. 6)	$ 103,447	$ 99,516	$ 95,584	$ 91,653	$ 87,722	$ 83,791	$ 79,860	$ 75,929	$ 71,998	$ 68,067
8	Annual Amortization	$ 75,379	$ 75,379	$ 75,379	$ 75,379	$ 75,379	$ 75,379	$ 75,379	$ 75,379	$ 75,379	$ 75,379
9	Total Annual Cost Recovery (ln. 5 + ln. 7 + ln. 8)	$ 349,812	$ 339,383	$ 328,954	$ 318,526	$ 308,097	$ 297,668	$ 287,239	$ 276,811	$ 266,382	$ 255,953
10	Number of YE Customers	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052
11	Annual Surcharge per Customer (ln. 9 / ln. 10)	$ 170.47	$ 165.39	$ 160.31	$ 155.23	$ 150.14	$ 145.06	$ 139.98	$ 134.90	$ 129.82	$ 124.73
12	Monthly Surcharge per Customer (ln. 11 / 12)	$ 14.21	$ 13.78	$ 13.36	$ 12.94	$ 12.51	$ 12.09	$ 11.67	$ 11.24	$ 10.82	$ 10.39

Line No.		Year 21	22	23	24	25	26	27	28	29	30
1	Beg Balance	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700	$ 2,699,700
2	Accumulated Amortization	$ (1,469,892)	$ (1,534,289)	$ (1,587,703)	$ (1,641,117)	$ (1,694,531)	$ (1,747,945)	$ (1,801,360)	$ (1,854,774)	$ (1,908,188)	$ (1,961,602)
3	Ending Balance (ln. 1 + Ln. 2)	$ 1,229,808	$ 1,165,411	$ 1,111,997	$ 1,058,583	$ 1,005,169	$ 951,756	$ 898,340	$ 844,926	$ 791,512	$ 738,098
4	Return %	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%
5	Return $'s (ln. 3 x ln. 4)	$ 106,009	$ 100,458	$ 95,854	$ 91,250	$ 86,646	$ 82,041	$ 77,437	$ 72,833	$ 68,228	$ 63,624
6	Incremental Income Tax Conversion Factor	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605
7	Annual Income Tax Component of Annual Cost Recovery Surcharge (ln. 5 x ln. 6)	$ 64,136	$ 60,777	$ 57,992	$ 55,206	$ 52,421	$ 49,635	$ 46,849	$ 44,064	$ 41,278	$ 38,493
8	Annual Amortization	$ 64,397	$ 53,414	$ 53,414	$ 53,414	$ 53,414	$ 53,414	$ 53,414	$ 53,414	$ 53,414	$ 53,414
9	Total Annual Cost Recovery (ln. 5 + ln. 7 + ln. 8)	$ 234,542	$ 214,650	$ 207,260	$ 199,870	$ 192,480	$ 185,090	$ 177,700	$ 170,311	$ 162,921	$ 155,531
10	Number of YE Customers	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052
11	Annual Surcharge per Customer (ln. 9 / ln. 10)	$ 114.30	$ 104.61	$ 101.00	$ 97.40	$ 93.80	$ 90.20	$ 86.60	$ 83.00	$ 79.40	$ 75.79
12	Monthly Surcharge per Customer (ln. 11 / 12)	$ 9.52	$ 8.72	$ 8.42	$ 8.12	$ 7.82	$ 7.52	$ 7.22	$ 6.92	$ 6.62	$ 6.32

BEFORE THE ARIZONA CORPORATION COMMISSION

SUSAN BITTER SMITH
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
DOUG LITTLE
Commissioner
TOM FORESE
Commissioner

IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP., AN ARIZONA CORPORATION, FOR AUTHORITY TO ISSUE EVIDENCE OF INDEBTEDNESS IN AN AMOUNT NOT TO EXCEED $3,400,000.	DOCKET NO. SW-02361A-15-0206
IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS WASTEWATER RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.	DOCKET NO. SW-02361A-15-0207

DIRECT TESTIMONY OF

CRYSTAL S. BROWN

EXECUTIVE CONSULTANT III

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

DECEMBER 16, 2015

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Rate Design

Liberty Utilities (Black Mountain Sewer), Corporation ("Black Mountain" or "Company") is a certificated Arizona public service corporation that provides wastewater utility service to approximately 2,100 customers during 2014 primarily in the Town of Carefree, in unincorporated portions of Maricopa County and in portions of the City of Scottsdale. The current rates for Black Mountain were approved in Decision No. 71865, dated August 31, 2010.

Monthly Customer Charge & Volumetric Rates

The Company proposes a monthly customer charge (flat rate) of $79.20 for residential customers with no volumetric rate. The Company proposes an $85.00 monthly customer charge for each commercial customer with a volumetric rate of $5.13 per 1,000 gallons for all monthly water usage. The Company proposes no change to the current commodity rate for effluent of $0.46051 per thousand gallons.

Staff recommends a $75.00 residential monthly customer charge with no volumetric rate as shown on Schedule CSB-1. Staff recommends a $85.00 monthly customer charge for each commercial customer with a volumetric rate of $1.78 per 1,000 gallons for all water usage. Staff recommends no change to the current commodity rate for effluent of $0.46051 per thousand gallons.

Typical Bill Analysis

The typical residential customers with a current flat rate of $65.24 per month would experience a $13.96 or a 21.40 percent increase in their monthly bill to $79.20 under the Company's proposed rates. These same customers would experience a $9.76 or a 14.96 percent increase in their monthly bill to $75.00 under Staff's recommended rates, as shown on Schedule CSB-2.

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Crystal S. Brown. I am an Executive Consultant III employed by the Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Are you the same Crystal S. Brown who filed direct testimony on revenue requirement in this case?

A. Yes.

COST OF SERVICE STUDY

Q. Did Black Mountain prepare a Cost of Service Study ("COSS")?

A. Yes, Black Mountain prepared a COSS.

Q. What is a COSS?

A. In very simple terms, a COSS is an estimation of cost-causation by customer class, i.e. how much it costs the utility to provide its service to each specific customer class. A COSS allocates a portion of a company's total expenses and rate base to each customer class. The reason for determining the costs incurred by the utility to serve each customer class is to assist in allocating the revenue requirement for each customer class.

Q. Can the result of a COSS be widely divergent based upon the subjective judgement used for the allocation factors?

A. Yes. The use of arbitrary allocation factors in a COSS can lead to widely divergent results based upon the judgments involved. I believe this fact is one of many reasons why formal COSS are not required when developing the rate design for small wastewater systems.

Q. Is a COSS synonymous to rate design?

A. No, it is not. Rate design should not be confused with a COSS. A COSS is the allocation of costs to each customer class. Rate design involves the allocation of required revenues to each customer.

Q. Should COSS results be the sole factor used in rate design?

A. No, it should not. The results from a COSS are not definitive because, absent formal system demand studies, a large degree of subjectivity is used in allocating costs. Consequently, a COSS should not be used as the sole factor in rate design.

Q. How did Staff use Black Mountain's COSS in its rate design?

A. Staff utilized the COSS as a guideline or starting point for its rate design. However, Staff did not rely solely on the Company's COSS but used other factors to develop its rate design.

Q. What other factors did Staff consider in developing its rate design?

A. In addition to using the results of the COSS at the outset of Staff's analysis, Staff also considered factors such as revenue stability, gradualism, and fair apportionment of revenue among customer classes.

Q. Has Staff recommended an overall revenue decrease?

A. Yes, Staff has recommended a 7.66 percent revenue decrease.

Q. Why then are the residential customers experiencing a rate increase?

A. There are two primary reasons for the increase. First, some costs were shifted to the residential class from the commercial class due to the efforts to move the return level generated by the various customer classes closer. Second, the change in the commercial commodity rate from "per gallon per day" of wastewater flow to "per thousand gallons" of water usage further reduced the revenue generated from the commercial class that was again shifted to the residential class.

RATE DESIGN

Q. Has Staff prepared a schedule summarizing the present, Company proposed, and Staff recommended rates and service charges?

A. Yes. Schedule CSB-1 provides a summary of the Company's present, Company's proposed, and Staff's recommended rates.

Q. What changes has the Company proposed for the commercial customer class?

A. The Company has proposed to change its current rate design of "gallons per day of wastewater flow" which is based upon Engineering Bulletin No. 12 published by the Arizona Department of Environmental Quality to "per 1,000 gallons of actual monthly water usage." The Company stated that it received the actual commercial customer water usage data from the Town of Carefree Water Company, Cave Creek Water Company and City of Scottsdale, the water providers in Liberty Black Mountain's service area. The Company further stated that it will continue to get monthly water use data if the Commission approves a rate design based on water usage.

Q. Why has the Company proposed this change?

A. According to the Company the reasons are to: (1) eliminate the reliance on ADEQ Bulletin 12 and address concerns over its use for setting a customer's wastewater charges; (2) keep it as simple as possible; (3) provide for a design that better reflects the demand each commercial customer places on the system; and (4) continue to provide a reasonable level of revenue stability.

Q. Does Staff concur with the Company's proposed change?

A. Yes. The Company's proposal to use a commercial customer's actual usage to estimate wastewater flow will provide a more realistic estimation of wastewater flow.

Q. Please summarize the present rate design.

A. The present monthly customer charge for the residential customers is $65.24 with no commodity charge. Regular commercial customers pay $0.24873 per gallon per day of sewer flow[1] and no monthly service charge. Effluent customers pay $0.46051 per thousand gallons.

Q. Please summarize the Company's proposed rate design.

A. The Company proposes a monthly customer charge (flat rate) of $79.20 for residential customers with no volumetric rate. The Company proposes an $85.00 monthly customer charge for each commercial customer with a volumetric rate of $5.13 per 1,000 gallons for all monthly water usage. The Company proposes no change to the current commodity rate for effluent of $0.46051 per thousand gallons.

Q. Please summarize Staff's recommended rate design.

A. Staff recommends a $75.00 residential monthly customer charge with no volumetric rate as shown on Schedule CSB-1. Staff recommends a $85.00 monthly customer charge for each commercial customer with a volumetric rate of $1.78 per 1,000 gallons for all water usage. Staff recommends no change to the current commodity rate for effluent of $0.46051 per thousand gallons.

---

[1] Flow volume is based on the average daily flows set forth in the *Engineering Bulletin No. 12*, Table 1, published by the Arizona Department of Environmental Quality (June 1989).

Q. What is the rate impact on a typical residential customer?

A. The typical residential customer with a current flat rate of $65.24 per month would experience a $13.96 or a 21.40 percent increase in their monthly bill to $79.20 under the Company's proposed rates. This same customer would experience a $9.76 or a 14.96 percent increase in their monthly bill to $75.00 under Staff's recommended rates, as shown on Schedule CSB-2.

Q. What is the rate impact on a typical commercial customer?

A. Using the data provided by Mr. Bourassa on page 31 of his direct testimony, the typical commercial customer with an average gallons per day ("gpd") rating of 1,612 gpd of wastewater flow would be $401.00 under current rates. Under the Company's proposed rates, a typical commercial customer with an average monthly water usage of 35,009 gallons would experience a $136.70 or a 34.09 percent decrease in their monthly bill to $264.30. This same customer would experience a $253.68 or a 63.26 percent decrease in their monthly bill to $147.32 under Staff's recommended rates, as shown on Schedule CSB-2.

MISCELLANEOUS SERVICE CHARGES

Q. Did the Company propose any changes to the service charges?

A. Yes. The Company proposes the following:

1. To change the Re-establishment charge from a flat rate of $25 to months off the system times the monthly minimum;
2. To remove the Reconnection Charge;
3. To add a Reconnection, Delinquent Charge at cost;
4. To add an After Hours Charge of $50; and
5. To change the Late Payment- Per Month charge from 1.50 percent per month to the greater of $5.00 or 1.50 percent per month on unpaid balance.

Q. Does Staff agree with the Company's proposal to change the Re-establishment charge from a flat rate of $25 to months off the system times the monthly minimum?

A. Yes, as the Company's proposal is consistent with Arizona Administrative Code ("A.A.C.")R14-2-603 D.

Q. Does Staff agree with the Company's proposal to remove the Reconnection Charge and to add a Reconnection, Delinquent Charge at cost?

A. Yes, the Company currently provides the reconnection service at no cost. The addition of a Reconnection, Delinquent Charge at cost is reasonable and consistent with the cost causation principle. In addition, Staff recommends the following language be added to the Company's tariff for the Reconnection, Delinquent Charge:

> **Reconnection – Delinquent** at **COST** which is reasonable and customary.
>
> A delinquent customer who has been disconnected from the utility and desires to be reconnected shall pay the actual cost of disconnection and the actual cost of reconnection. There shall be no charge for disconnection if no physical work was performed.

Q. Does Staff agree with the Company's proposal to add an After Hours Service Charge?

A. Yes, Staff agrees that the proposed After Hours Service Charge of $50.00 is reasonable and customary. Such a tariff compensates the utility for additional expenses incurred from providing after-hours service when this type of service is at the customer's request or for the customer's convenience.

For example, under the Company's proposal, a customer would be subject to a $25.00 Establishment fee if it is done during normal business hours, but would pay an additional $50.00 After-Hours fee **if the customer requested** that the establishment be done after normal business hours. Staff recommends that the following language be added to the Company's tariff for the After Hours Service Charge:

> The after-hours service charge shall apply to any service requested by Customer or for the customer's convenience that is performed by Company after regular business hours and shall be in addition to the regular business hours service charge.

Q. Does Staff agree with the Company's proposed changes to its Late Payment Charge?

A. Yes, Staff agrees that the Company's proposal to change the Late Payment-Per Month charge from 1.50 percent per month, to the greater of $5.00 or 1.50 percent per month on unpaid balance is reasonable and would be more effective in encouraging timely payment than the current 1.5 percent.

HOOK-UP FEE

Q. Did Black Mountain propose an off-site facilities hook-up fee ("HUF")?

A. Yes.

Q. What does Staff recommend?

A. Staff recommends approval of the HUF as discussed in greater detail in the testimony of Staff witness, Dorothy Hains.

PLANT CLOSURE SURCHARGE MECHANISM

Q. What are Staff's recommendations concerning Black Mountain's proposed Plant Closure Surcharge mechanisms?

A. Staff witness, James R. Armstrong, the Chief of the Financial and Regulatory Analysis section, will provide Staff's analysis and recommendations concerning the Plant Closure Surcharge mechanisms.

PURCHASED POWER ADJUSTOR MECHANISM

Q. In its Application, does Black Mountain propose the adoption of a cost recovery adjustment mechanism for purchased power?

A. Yes, the Company has proposed the adoption of a purchased power adjustment mechanism ("PPAM") in rates. As proposed, the PPAM will serve as a cost recovery adjustment mechanism for recovery of only the increase (decrease) in purchased power expense caused by an increase (decrease) in power rates charged to Black Mountain by the Company's electric utility provider, Arizona Public Service ("APS"). The purchased power expense included in operating expenses will serve as the base figure against which the amounts to be recovered or refunded when increases or decreases in purchased power costs per kwh are incurred in future years. Increases (decreases) to purchased power costs expense resulting from changes in the volume of water pumped will not affect the amount to be recovered (refunded) by the proposed PPAM.

Q. Why has the Company proposed the adoption of a PPAM in rates?

A. Because Black Mountain has no control over the rate it is charged for electric power by APS, the Company's proposed PPAM is intended as a mechanism to pass along any cost increase, or decrease, in purchased power to customers. The Company believes that a closer match between costs and customer bills will reduce regulatory lag, and create a more efficient price signal. Additionally, Black Mountain believes that the presence of a PPAM will help ensure that the Company has the opportunity to earn its authorized rate of return.

Q. What is Staff's recommendation with regard to Black Mountain's request for a PPAM?

A. Staff recommends approval of the PPAM and that the Company file a PPAM tariff and a Plan of Administration for Staff's review and approval.

RATE CASE EXPENSE SURCHARGE

Q. Is Black Mountain proposing a surcharge for rate case expense?

A. Yes.

Q. Does Staff support the recovery of rate case expense through a surcharge?

A. No. Staff does not support the recovery of rate case expense through a surcharge for the following reasons:

1. Just as with every expense item in a monopolistic environment, the purpose of regulation and rate setting is to give the company the opportunity to recover its expenses, and not guarantee recovery. This helps to ensure that the company vigilantly looks for and implements ways to reduce costs.
2. Regulated utilities are rewarded for taking risks in the same manner as unregulated companies that must compete and stay afloat by continued improvement, efficiency, and good management. The use of a surcharge may diminish the incentives for companies to operate efficiently.
3. Further, normalization is a reasonable and widely used method of recovering rate case expense. The Commission used this method in the Company's last rate case (SW-02361A-08-0609) normalizing rate case expense using three years and allowing the Company to recover its full cost without a surcharge.

Q. What is Staff's recommendation?

A. Staff recommends that the Company's proposed surcharge for rate case expense be denied.

PROPERTY TAX ADJUSTOR MECHANISM

Q. Did Black Mountain propose an adjustor mechanism for property taxes?

A. Yes.

Q. Does Staff have any concerns about the Company having both a forward-looking method of calculating property taxes and a property tax adjustor mechanism?

A. Yes. The Company proposed and Staff recommended forward-looking property tax calculation typically provides more revenue for property taxes through rates than the amount that is actually due and payable to the Arizona Department of Revenue ("ADOR").

Q. What is the main cause of this difference in property taxes?

A. The ADOR determines the property taxes of a utility using a formula that is based on a utility's historical revenues. Under the ADOR methodology, the full cash value is based on twice the average of the company's three previous years of *actual revenues*. Under the forward-looking approach, the full cash value is based on twice the average of the Staff adjusted test year revenue and the Staff recommended revenue (which includes the increase).

Q. Staff has recommended a rate decrease, how will property taxes be impacted?

A. Even with a rate decrease, Staff's recommended forward-looking property tax calculation produces a property tax of $48,214 (based on a three year average revenue of approximately $2,182,677) which is more than the Company's actual property tax expense of $47,904 (based on a historical three year average revenue of $2,199,522)[2].

Q. What is Staff's recommendation?

A. Staff recommends that the Company be provided the option to choose either (1) a property tax adjustor mechanism with only the actual test year property tax expense of $47,904 included in operating expenses or (2) the pro forma property tax expense of $48,214 derived using the forward-looking property tax calculation with no property tax adjustor mechanism.

[2] Revenues per Utilities Annual Reports: 2011, $2,179,616; 2012, $2,192,209; 2013, $2,226,742.

Q. Does this conclude your direct testimony for rate design?

A. Yes, it does.

Liberty Utilities (Black Mountain Sewer) Corp.
Docket Nos. SW-02631A-15-0206 & SW-02631A-15-0207
Test Year Ended December 31, 2014

Schedule CSB-1

RATE DESIGN

Monthly Service Charge:	**Present Rates**	**Company Proposed**	**Staff Recommended**
Residential Service - Per single family unit	$65.24	$ 79.20	$ 75.00
Commercial - Per month	No Tariff	$ 85.00	$ 85.00
Commodity Rate			
Commercial - Per gallon per day **(a)**	$ 0.28473	Remove	Remove
Commercial - Per 1,000 gallons **(b)**	No Tariff	$ 5.13	$ 1.78

(a) Per Gallon per Day of wastewater flow. Wastewater flows are based on Engineering Bulletin 12, Table 1 published by ADEQ.
(b) Monthly water usage provided by the Town of Carefree and City of Scottsdale.

Effluent Sales			
Per thousand gallons	$ 0.46051	$ 0.46051	$ 0.46051
Per Acre Feet	$150.00	$150.00	$150.00

Service Charges:	**Present Rates**	**Company Proposed**	**Staff Recommended**
Establishment	$ 25.00	$ 25.00	$ 25.00
Re-establishment	$ 25.00	[1]	[1]
Re-connection	No Charge	Remove	Remove
Re-connection, Delinquent	No Tariff	[2]	[5]
After Hours Charge	No Tariff	$ 50.00	$ 50.00
Minimum Deposit (Residential)	[3]	[3]	[3]
Minimum Deposit (Non-Residential)	[3]	[3]	[3]
Deposit Interest	6.00%	6.00%	6.00%
NSF Check Charge	$ 10.00	$ 10.00	$ 10.00
Deferred Paymnt Finance Charge, per month	1.50%	1.50%	1.50%
Late Charge, per month	1.50%	1.50%	1.50%
Main Extension Tariff	Cost	Cost	Cost
Hook-Up Fee	Per Tariff	Per Tariff	Per Tariff

[1] Per A.A.C. R14-2-603D: Within 12 months. Residential and non-residential customers shall pay the applicable minimum charge times the number of months disconnected.

[2] Customer shall pay the actual cost of physical disconnection and establishment (if same customer) and there shall be no charge for disconnection if no physical work is performed.

[3] Per A.A.C. R14-2-603B: Residential - two times average bill, Non-residential - two and one-half times average bill

[4] After Hours Service Charge applies to all services performed after regular business hours and is in addition to the service charge during regular business hours.

[5] Cost shall be reasonable and customary. A delinquent customer who has been disconnected from the utility and desires to be reconnected shall pay the actual cost of disconnection and the actual cost of reconnection. There shall be no charge for disconnection if no physical work was performed.

[6] The after-hours service charge shall apply to any service requested by Customer or for the customer's convenience that is performed by Company after regular business hours and shall be in addition to the regular business hours service charge.

Liberty Utilities (Black Mountain Sewer) Corp.
Docket Nos. SW-02631A-15-0206 & SW-02631A-15-0207
Test Year Ended December 31, 2014

Schedule CSB-2

TYPICAL BILL ANALYSIS

	Per Company - Residential				Per Staff - Residential			
	Present Rates	Company Proposed	Dollar Increase	Percent Increase	Present Rates	Staff Recommended	Dollar Increase	Percent Increase
Residential Service - Per single family unit	$65.24	$ 79.20	$ 13.96	21.40%	$65.24	$ 75.00	$ 9.76	14.96%

	Per Company - Commercial				Per Staff - Commercial			
	Present Rates	Company Proposed	Dollar Increase	Percent Increase	Present Rates	Staff Recommended	Dollar Increase	Percent Increase
Commercial	$401.00	$ 264.30	$ (136.70)	-34.09%	$401.00	$ 147.32	$ (253.68)	-63.26%

BEFORE THE ARIZONA CORPORATION COMMISSION

SUSAN BITTER SMITH
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
DOUG LITTLE
Commissioner
TOM FORESE
Commissioner

IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP., AN ARIZONA CORPORATION FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN IT'S WASTEWATER RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON	)	DOCKET NO. SW-02361A-15-0207
IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP., AN ARIZONA CORPORATION FOR AUTHORITY TO ISSUE EVIDENCE OF INDEBTEDNESS IN AN AMOUNT NOT TO EXCEED $3,400,000	)	DOCKET NO. SW-02361A-15-0206

DIRECT

TESTIMONY

OF

DOROTHY HAINS, P. E.

UTILITIES ENGINEER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

DECEMBER 16, 2015

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LIBERTY UTILITIES BLACK MOUNTAIN SEWER CORP
DOCKET NOS. SW-02361A-15-0206 & SW-02361A-15-0207

Dorothy Hains' testimony discusses Utilities Division Staff's ("Staff") review of Liberty Utilities Black Mountain Sewer Corp ("BMSC" or "Company") Cost of Service Study ("COSS") for the rate case filed with the Arizona Corporation Commission ("Commission"), and presents the results of Staff's analysis.

Based on its review of BMSC's COSS, Staff's conclusions are as follows:

1. It is Staff's conclusion that BMSC developed the COSS and allocation factors appropriately.

2. Staff further concludes that, based on the evaluation of the COSS model utilized by BMSC, the results of the COSS are satisfactory.

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Dorothy Hains. My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Are you the same Dorothy Hains who has previously filed testimony in this Liberty Utilities Black Mountain Sewer Corporation ("BMSC", "Black Mountain" or "Company") rate proceeding?

A. Yes.

Q. Did Staff perform an analysis of the application that is the subject of this proceeding?

A. Yes, Staff reviewed the Company's Cost of Service Study ("COSS").

Q. What is the purpose of this Direct Testimony?

A. The purpose is to discuss Staff's review of BMSC's COSS for the rate case, and present the results of this review along with Staff's recommendations.

Q. Was rate design part of your assignment and what is a COSS?

A. No. A COSS is the allocation of only costs to each customer class. Rate design is basically the allocation of revenues within each customer class. The COSS is only one of many factors that is considered when allocating revenues. Once the revenue allocation is completed, the specific rates are designed to collect those revenues. Staff's rate design witness for this rate case is Ms. Crystal Brown.

II. COST OF SERVICE STUDY – REVIEW PROCESS

Q. What does the COSS signify?

A. There are three steps in performing the COSS. They are: 1) Functionalization; 2) Classification; and 3) Allocation. First, the COSS enables us to determine the system cost of service by classifying the utility's costs (investments and expenses) by function, such as commodity-related, demand-related, and customer-related functions. Customer-related functions are further broken down into customers and customer services. Second, the study breaks down these costs by customer classes to reflect as closely as possible the cost causation by respective customer classes. Third, the results of the COSS provide a benchmark for the revenues needed from each customer category by allocating the revenue requirement for each customer class.

Q. Is there a standard COSS Model?

A. There is no standard methodology for designing a COSS, but it is generally advisable to follow a range of alternatives to identify which allocations are more reasonable than others. For that reason, the COSS should be used as a general guide only and as one of many considerations in designing rates.

Q. Did Staff conduct a separate independent COSS?

A. No, Staff did not conduct a separate independent COSS.

Q. What was the process Staff used in reviewing BMSC's COSS?

A. Staff reviewed BMSC's overall COSS methodology, which is the Commodity-Demand method as outlined in the American Water Works Association Manual M1, "Principles of Water Rates, Fees, and Charges". The Commodity-Demand Method breaks down the costs of providing wastewater service into three primary cost components: commodity costs (costs that tend to vary with the amount of wastewater discharged by the customers), demand costs (costs associated with peak flow/demand), and customers costs (costs not associated with wastewater treatment, such as billing costs). Staff finds that BMSC's Commodity-Demand Method is appropriate.

III. CONCLUSIONS

Q. Based upon your testimony, what are Staff's conclusions regarding the Cost of Service Study?

A. Based on the review of BMSC's COSS, Staff's conclusions are as follows:

1. It is Staff's conclusion that BMSC performed the COSS consistent with the methodology generally accepted in the industry, and developed the allocation factors appropriately in accordance with the Staff recommended and Commission approved allocation factors in prior COSS studies filed with this Commission.

2. Staff further concludes that, based on the evaluation of the COSS model utilized by BMSC, the results of the COSS are satisfactory.

Staff's conclusions are limited to the specific facts of this case and do not create any precedent regarding Cost of Service Studies generally.

Q. Does this conclude your Direct Testimony?

A. Yes, it does.