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BEFORE THE ARIZONA CORPORATION COMMISSION

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**COMMISSIONERS**  
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GARY PIERCE  
PAUL NEWMAN  
SANDRA D. KENNEDY  
BOB STUMP

IN THE MATTER OF THE APPLICATION OF LITCHFIELD PARK SERVICE COMPANY, 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-01428A-09-0103

IN THE MATTER OF THE APPLICATION OF LITCHFIELD PARK SERVICE COMPANY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS WATER RATES AND CHARGES FOR UTILITY SERVICES BASED THEREON.

DOCKET NO. W-01427A-09-0104

**STAFF NOTICE OF FILING DIRECT TESTIMONY**

The Utilities Division of the Arizona Corporation Commission ("Staff") hereby files the Direct Testimony of Staff Witnesses Jeffrey Michlik, Pedro Chaves, Juan Manrique, and Marlin Scott, Jr. in the above-referenced matter.

RESPECTFULLY SUBMITTED this 4<sup>th</sup> day of November, 2009.

Arizona Corporation Commission  
**DOCKETED**

NOV - 4 2009

DOCKETED BY

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...

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28 

**DIRECT  
TESTIMONY**

**OF**

**JEFFREY M. MICHLIK**

**PEDRO M. CHAVES**

**JUAN C. MANRIQUE**

**MARLIN SCOTT, JR.**

**DOCKET NOS. SW-01428A-09-0103**

**AND W-01427A-09-0104**

**IN THE MATTER OF THE APPLICATION OF  
LITCHFIELD PARK SERVICE COMPANY AN  
ARIZONA CORPORATION, FOR A  
DETERMINATION OF THE FAIR VALUE OF ITS  
UTILITY PLANTS AND PROPERTY AND FOR  
INCREASES IN ITS WASTEWATER RATES  
AND SERVICE BASED THEREON**

**IN THE MATTER OF THE APPLICATION OF  
LITCHFIELD PARK SERVICE COMPANY, AN  
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DETERMINATION OF THE FAIR VALUE OF ITS  
UTILITY PLANTS AND PROPERTY AND FOR  
INCREASES IN ITS WATER RATES AND  
CHARGES FOR UTILITY SERVICE BASED  
THEREON**

**NOVEMBER 4, 2009**

BEFORE THE ARIZONA CORPORATION COMMISSION

KRISTIN K. MAYES

Chairman

GARY PIERCE

Commissioner

PAUL NEWMAN

Commissioner

SANDRA D. KENNEDY

Commissioner

BOB STUMP

Commissioner

IN THE MATTER OF THE APPLICATION OF )  
LITCHFIELD PARK SERVICE COMPANY, )  
AN ARIZONA CORPORATION, FOR A )  
DETERMINATION OF THE FAIR VALUE OF )  
ITS UTILITY PLANTS AND PROPERTY AND )  
FOR INCREASES IN ITS WATER RATES, )  
AND CHARGES FOR UTILITY SERVICE )  
BASED THEREON, AND APPROVAL OF )  
ASSOCIATED FINANCINGS )  
\_\_\_\_\_ )

DOCKET NO. W-01427A-09-0104  
DOCKET NO. W-01427A-09-0116  
DOCKET NO. W-01427A-09-0120

DIRECT

TESTIMONY

OF

JEFFREY M. MICHLIK

PUBLIC UTILITIES ANALYST V

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

NOVEMBER 4, 2009

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**EXECUTIVE SUMMARY  
LITCHFIELD PARK SERVICE COMPANY  
WATER DIVISION**

**DOCKET NOS. W-01427A-09-0104, W-01427A-09-0116, AND W-01427A-09-0120**

Litchfield Park Service Company – Water Division (“LPSCO or Company”) is an Arizona “C” Corporation. Its principal place of business is 12725 W. Indian School Road, Suite D-101, Avondale, Arizona. The Company is engaged in the business of providing water utility services in its certificated areas in portions of Pinal County, Arizona. The Company served approximately 15,600 water customers during the test year ended September 30, 2008. The Company’s current rates were approved in Decision No. 65436, dated December 9, 2002.

Rate Application:

The Company proposes rates that would increase operating revenue by \$7,508,146 to produce operating revenue of \$13,983,149 resulting in operating income of \$4,327,196, or a 115.96 percent increase over test year revenue of \$6,475,003. The Company also proposes a fair value rate base (“FVRB”) of \$37,924,592, which is its original cost rate base (“OCRB”), and an 11.41 percent rate of return on the FVRB.

Staff recommends rates that would increase operating revenue by \$5,328,747 to produce operating revenue of \$11,803,750 resulting in operating income of \$3,237,982, or an 82.30 percent increase over adjusted test year revenue of \$6,475,003. Staff recommends an OCRB of \$37,218,182 which is its FVRB, and an 8.70 percent rate of return on the FVRB.

Financings:

The Company submitted two financing applications to assist in funding certain capital projects. One project, under Docket No. 09-0116 for the construction of two recharge wells, is estimated at \$1,755,000 and another project, under Docket No. 09-0120 for the construction of a 200 kW roof mounted solar generator, is estimated at \$1,170,000. The Company is requesting approval of funding for these two projects through the use of Water Infrastructure Financing Authority (“WIFA”) indebtedness. Staff recommends approval of these financing requests.

1 **INTRODUCTION**

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

3 A. My name is Jeffrey M. Michlik. I am a Public Utilities Analyst V employed by the  
4 Arizona Corporation Commission (“ACC” or “Commission”) in the Utilities Division  
5 (“Staff”). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.  
6

7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst V.**

8 A. In my capacity as a Public Utilities Analyst V, I analyze and examine accounting,  
9 financial, statistical and other information and prepare reports based on my analyses that  
10 present Staff’s recommendations to the Commission on utility revenue requirements, rate  
11 design and other matters. I also provide expert testimony on these same issues.  
12

13 **Q. Please describe your educational background and professional experience.**

14 A. In 2000, I graduated from Idaho State University, receiving a Bachelor of Business  
15 Administration Degree in Accounting and Finance, and I am a Certified Public  
16 Accountant with the Arizona State Board of Accountancy. I have attended the National  
17 Association of Regulatory Utility Commissioners’ (“NARUC”) Utility Rate School,  
18 which presents general regulatory and business issues.  
19

20 I joined the Commission as a Public Utilities Analyst in May of 2006. Prior to  
21 employment with the Commission, I worked four years for the Arizona Office of the  
22 Auditor General as a Staff Auditor, and one year in public accounting as a Senior Auditor.  
23

24 **Q. What is the scope of your testimony in this case?**

25 A. I am presenting Staff’s analysis and recommendations regarding Litchfield Park Service  
26 Company’s (“LPSCO” or “Company”) application for a permanent increase in its rates

1 and charges for water utility service within Maricopa County, Arizona. I am presenting  
2 testimony and schedules addressing rate base, operating revenues and expenses, revenue  
3 requirement, and financings. Staff witness Pedro Chavez is presenting Staff's rate design.  
4 Staff witness Juan Manrique is presenting Staff's cost of capital. Mr. Marlin Scott Jr. is  
5 presenting Staff's engineering analysis and related recommendations.  
6

7 **Q. What is the basis of your testimony in this case?**

8 A. I performed a regulatory audit of the Company's application and records. The regulatory  
9 audit consisted of examining and testing financial information, accounting records, and  
10 other supporting documentation and verifying that the accounting principles applied were  
11 in accordance with the Commission-adopted NARUC Uniform System of Accounts  
12 ("USOA").  
13

14 **BACKGROUND**

15 **Q. Please review the background of this application.**

16 A. The Company is an Arizona "C" Corporation. Its principal place of business is 12725 W.  
17 Indian School Road, Suite D-101, Avondale, Arizona. The Company is engaged in the  
18 business of providing water utility services in its certificated areas in portions of Maricopa  
19 County, Arizona. The Company served approximately 15,600 water customers during the  
20 test year ended September 30, 2008. The Company's current rates were approved in  
21 Decision No. 65436, dated December 9, 2002.  
22

23 The Company is a wholly owned subsidiary of Algonquin Water Resources. Algonquin  
24 Water Resources is the Company's only shareholder. Algonquin Water Resources is a

1 wholly-owned subsidiary of Algonquin Power Income Fund<sup>1</sup> (Algonquin Water Resources  
2 and Algonquin Power Income Fund are collectively referred to as “Algonquin”).

3  
4 In addition to LPSCO, Algonquin owns seven other companies located in Arizona: Black  
5 Mountain Sewer Company, Gold Canyon Sewer Company, Rio Rico Utilities, Inc.,  
6 Entrada Del Oro Sewer Company, Northern Sunrise Water Company, Inc., Southern  
7 Sunrise Water Company, Inc., and Bella Vista Water Company. Algonquin has a contract  
8 to manage and operate Black Mountain. Algonquin also owns and/or operates utility  
9 systems in Illinois and Texas.

10  
11 **CONSUMER SERVICES**

12 **Q. Please provide a brief history of customer complaints received by the Commission**  
13 **regarding the Company. Additionally, please discuss customer responses to the**  
14 **Company’s proposed rate increase.**

15 **A.** A review of the Commission’s Consumer Services database for the Company from  
16 January 1, 2006, to October 14, 2009, revealed the following for the Water Division:

17  
18 2006 – Two complaints (one new service and one disconnect). 2007 – Three complaints  
19 (one deposit, one disconnect and one new service). 2008 – Three complaints (one billing,  
20 one new service and one quality of service). 2009 – Four complaints (two billing, one  
21 new service and one construction), and thirty-six opinions (rate case all opposed). All  
22 complaints have been resolved and closed except one which recently completed the  
23 mediation process.

24  

---

<sup>1</sup> Algonquin Power Income Fund is an investment trust that owns or has interests in 71 companies in the United States and Canada, including 41 hydroelectric facilities, 5 natural gas cogeneration facilities, and 15 water and sewer facilities.

1 **COMPLIANCE**

2 **Q. Please provide a summary of the compliance status of the Company.**

3 A. A check of the ACC's Compliance database indicates that there are currently no  
4 delinquencies for the Company.

5  
6 **SUMMARY OF FILING, RECOMMENDATIONS, AND ADJUSTMENTS.**

7 **Q. Please summarize the Company's proposals in this filing.**

8 A. The Company proposes rates that would increase operating revenues by \$7,508,146 to  
9 produce operating revenue of \$13,983,149 resulting in operating income of \$4,327,196, or  
10 a 115.96 percent increase over test year revenue of \$6,475,003. The Company also  
11 proposes a fair value rate base ("FVRB") of \$37,924,592 which is its original cost rate  
12 base ("OCRB"), and an 11.41 percent rate of return on the FVRB.

13  
14 **Q. Please summarize Staff's recommendations.**

15 A. Staff recommends rates that would increase operating revenue by \$5,328,747 to produce  
16 operating revenue of \$11,803,750 resulting in operating income of \$3,237,982, or an  
17 82.30 percent increase over adjusted test year revenue of \$6,475,003. Staff recommends  
18 an OCRB of \$37,218,182 which is its FVRB, and an 8.70 percent rate of return on the  
19 FVRB.

20  
21 **Q. What test year did the Company use in this filing?**

22 A. The Company's rate filing is based on the twelve months ended September 30, 2008 ("test  
23 year").

24  
25 **Q. Please summarize the rate base adjustments addressed in your testimony.**

26 A. My testimony addresses the following issues:

1           Post-Test Year Plant – This adjustment increases Post-Test Year Plant by \$18,805 to  
2 reflect the Company's updated cost of Post-Test Year Plant.

3  
4           Plant Not Used and Useful – This adjustment decreases Plant in Service by \$78,879 to  
5 remove plant that was deemed not used and useful, and the associated funding sources in  
6 the amount of \$16,565.

7  
8           Accumulated Depreciation – This adjustment decreases accumulated depreciation by  
9 \$35,223 based upon the adjustments Staff made to plant in service.

10  
11           Customer Deposits – This adjustment increases customer deposits by \$166,998 to include  
12 customer deposits.

13  
14           Deferred Income Taxes – This adjustment increases Deferred Income Taxes by \$314,036  
15 to reverse the Company's pro-forma adjustment.

16  
17           Unamortized Debt Issuance Costs – This adjustment removes Unamortized Debt Issuance  
18 Costs in the amount of \$134,528.

19  
20           Deferred Regulatory Assets – This adjustment removes Deferred Regulatory Assets in the  
21 amount of \$82,561 to reflect Commission Decision No. 69912, dated September 27, 2007.

22  
23           **Q. Please summarize the operating revenue and expense adjustments addressed in your**  
24           **testimony.**

25           **A. My testimony addresses the following issues:**

1  
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22

Corporate Expense Allocation – This adjustment decreases operating expenses by \$250,182 to remove costs incurred related to the unregulated affiliate’s business operations.

Rate Case Expense – This adjustment decreases rate case expense by \$28,000 to reflect Staff’s normalization over 5 years.

Meals and Entertainment Expense – This adjustment removes expenses in the amount of \$827 for meals and entertainment.

Bad Debt Expense – This adjustment increases bad debt expenses by \$5,284 to reflect the Staff’s normalization of bad debt expense.

Depreciation Expense – This adjustment decreases expenses by \$100,905 to adjust depreciation based on Staff’s plant in service numbers.

Property Tax Expense – This adjustment decreases expenses by \$116,358 to adjust property taxes to Staff’s adjusted test year amount.

Income Tax Expense – This adjustment increases expenses by \$198,423 to adjust income taxes to Staff’s adjusted test year amount.

1 **RATE BASE – WATER DIVISION**

2 *Fair Value Rate Base*

3 **Q. Did the Company prepare a schedule showing the elements of Reconstruction Cost**  
4 **New Rate Base?**

5 A. No, the Company did not. The Company's filing treats the OCRB the same as the FVRB.

6  
7 *Rate Base Summary*

8 **Q. Please summarize Staff's adjustments to the Company's Water rate base shown on**  
9 **Schedules JMM-W3 and JMM-W4.**

10 A. Staff's adjustments to the Company's rate base resulted in a net decrease of \$706,410,  
11 from \$37,924,592 to \$37,218,182. This decrease was primarily due to: (1) removal of  
12 plant that was not serving customers during the test year, (2) related adjustment to  
13 accumulated depreciation, (3) adjustment to customer deposits, (4) adjustment to deferred  
14 income taxes, (5) adjustment to deferred assets, and (6) removal of unamortized debt  
15 issuance costs.

16  
17 *Rate Base Adjustment No. 1 – Water Division, Post-Test Year Plant*

18 **Q. Did Staff make an adjustment to post-test year plant?**

19 A. Yes.

20  
21 **Q. What adjustment did Staff make?**

22 A. Staff identified \$18,805 as additional costs of the post-test year arsenic treatment project,  
23 as shown on Schedule JMM-W5.

24

1 **Q. Doesn't Staff typically recommend disallowance of post test year plant?**

2 A. Staff evaluates post-test year plant on a case by case basis, evaluating the facts and  
3 circumstances of each case. Largely because of its importance to the public health, in the  
4 past, Staff has recommended that post-test year plant related to arsenic treatment receive  
5 recognition in rate base.  
6

7 **Q. Why did Staff increase the amount of post-test year plant by \$18,805?**

8 A. Marlin Scott, Jr., Staff's Engineer, inspected the entire system and identified additional  
9 costs that the Company has incurred in relation to the arsenic treatment project (See Staff  
10 Engineering Report, Section I, Post Test Year Plant).  
11

12 **Q. What is Staff's recommendation?**

13 A. Staff recommends increasing post-test year plant by \$18,805 from \$1,866,965 to  
14 \$1,885,770, as shown on Schedules JMM-W4 and JMM-W5.  
15

16 *Rate Base Adjustment No. 2 – Water Division, Plant Not Used and Useful*

17 **Q. Did Staff make an adjustment to plant that was not used and useful?**

18 A. Yes.  
19

20 **Q. What adjustment did Staff make?**

21 A. Staff identified \$78,879 in plant that was not used and useful as shown on Schedule JMM-  
22 W6.  
23

1 **Q. Why did Staff make this adjustment?**

2 A. Marlin Scott, Jr., Staff's Engineer, inspected the entire system and identified certain  
3 individual plant items that were not serving customers during the test year (See Staff  
4 Engineering Report, Section H, Plant Not Used and Useful).

5  
6 **Q. What is Staff's recommendation?**

7 A. Staff recommends decreasing plant in service by \$78,879, from \$73,731,815 to  
8 \$73,671,740 to remove all plant from rate base that was not used and useful and the  
9 associated funding sources; Advances in Aid of Construction in the amount of \$8,677,  
10 from \$24,583,673 to \$24,574,996 and Contributions in Aid of Construction in the amount  
11 of \$7,888, from \$3,104,068 to \$3,096,180, as shown on Schedules JMM-W4 and JMM-  
12 W6.

13  
14 *Rate Base Adjustment No. 3 – Water Division, Accumulated Depreciation*

15 **Q. Did Staff make an adjustment to Accumulated Depreciation?**

16 A. Yes.

17  
18 **Q. Why did Staff make this adjustment?**

19 A. Staff adjusted accumulated depreciation to reflect the Staff recommended plant balances  
20 adjusted to remove not used and useful plant.

21  
22 **Q. What is Staff's recommendation?**

23 A. Staff recommends decreasing accumulated depreciation by \$35,223, from \$9,107,141 to  
24 \$9,071,918, as shown on Schedules JMM-W4 and JMM-W7.

25

1 *Rate Base Adjustment No. 4 – Water Division, Customer Deposits*

2 **Q. Did Staff make an adjustment to customer deposits?**

3 A. Yes.

4  
5 **Q. What adjustment did Staff make?**

6 A. Staff decreased Customer Deposits by \$166,998.

7  
8 **Q. Why did Staff make this adjustment?**

9 A. Based on Staff data request JMM 1.56, Staff identified Customer Deposits in the test year  
10 that were not included in the rate application. Specifically, the Company only included  
11 customer meter deposits and no other Customer Deposits.

12  
13 **Q. What is Staff's recommendation?**

14 A. Staff recommends increasing Customer Deposits by \$166,998 from \$68,685 to \$235,683  
15 as shown on Schedules JMM-W4 and JMM-W8.

16  
17 *Rate Base Adjustment No. 5 – Water Division, Deferred Income Taxes and Credits*

18 **Q. Did Staff make an adjustment to plant for Deferred Income Taxes and Credits?**

19 A. Yes.

20  
21 **Q. What adjustment did Staff make?**

22 A. Staff reversed the Company's pro-forma adjustment.

23  
24 **Q. What are pro-forma adjustments?**

25 A. Pro-forma adjustments are adjustments to actual test year results and balances to obtain a  
26 normal or more realistic relationship between revenues, expenses and rate base.

1 **Q. Does the Company's adjustment provide a normal or more realistic relationship**  
2 **between revenues, expenses and rate base?**

3 A. No. It is one-sided as it only includes elimination of the current liability in the future; it  
4 does not take into account the Company's future tax returns that may increase or decrease  
5 the deferred tax liability account.

6

7 **Q. What is a deferred tax liability?**

8 A. A deferred tax liability represents the increase in taxes payable in *future years* as a result  
9 of taxable temporary differences existing at the end of the current year.

10

11 **Q. Will this taxable temporary difference reverse out at some future date?**

12 A. Yes, however we do not know at what date, so it is not known and measurable.

13

14 **Q. What is Staff's recommendation?**

15 A. Staff recommends reversal of the Company's adjustment by increasing Deferred Income  
16 Taxes by \$314,036, from \$21,451 to \$335,487, as shown on Schedules JMM-W4 and  
17 JMM-W9.

18

19 **Q. Does Staff have any other comments on the Company's Deferred Income Taxes and**  
20 **Credits?**

21 A. Yes.

22

23 **Q. Was Staff able to verify the amount of Deferred Income Taxes and Credits of**  
24 **\$335,487 before the pro-forma adjustment?**

25 A. No. Staff attempted to do so in data requests JMM 1.55, JMM 2.3, JMM 9.1 and JMM  
26 9.2. The Company was unwilling or unable to provide Staff with this documentation.

1 *Rate Base Adjustment No. 6 – Water Division, Unamortized Debt Issuance Costs*

2 **Q. Did Staff make an adjustment to Unamortized Debt Issuance Costs?**

3 A. Yes.

4  
5 **Q. What adjustment did Staff make?**

6 A. Staff removed the Unamortized Debt Issuance Costs.

7  
8 **Q. Why did Staff disallow the inclusion of Unamortized Debt Issuance Costs in rate**  
9 **base?**

10 A. Debt issuance costs are a “below the line” expense, similar to interest and, thus, should be  
11 paid from the return on rate base portion of the ratepayer charges. The unamortized debt  
12 issuance costs are therefore attributed to the shareholders and do not require an outlay of  
13 cash by the shareholders. Consequently, from a ratemaking standpoint, shareholders  
14 should not earn a return on such costs and the costs should not be included in rate base.

15  
16 **Q. Do you have a Commission authoritative reference?**

17 A. Yes. In Decision No. 71308, the Commission agreed that Unamortized Debt Issuance  
18 Costs should not be included in rate base.

19  
20 **Q. What is Staff’s recommendation?**

21 A. Staff recommends decreasing Unamortized Debt Issuance Costs by \$134,528, from  
22 \$134,528 to zero, as shown on Schedules JMM-W4 and JMM-W10.

23  
24 *Rate Base Adjustment No. 7 – Water Division, Deferred Regulatory Assets*

25 **Q. Did Staff make an adjustment to Deferred Regulatory Assets?**

26 A. Yes.

1 **Q. What adjustment did Staff make?**

2 A. Staff removed the Deferred Regulatory Assets.

3  
4 **Q. Can you provide some background regarding the Deferred Regulatory Asset Costs?**

5 A. Yes. On December 28, 2006, the Company filed a request asking for an accounting order  
6 that would authorize deferral of LPSCO's costs incurred in connection with the  
7 Company's response to the potential groundwater contamination. The requested costs  
8 include, but are not limited to: 1) litigation costs related to defending the Company against  
9 lawsuits; 2) litigation costs related to seeking restitution from polluters/contaminators; 3)  
10 increases in operation and maintenance costs from alternative (replacement) water  
11 sources; 4) capital costs of acquiring and/or constructing alternative (replacement) sources  
12 of water; 5) capital costs and/or operating expenses to treat contaminated water supplies;  
13 6) settlement costs and/or amounts received as a result of settlements with  
14 polluters/contaminators; and 7) punitive damages received as the result of litigation  
15 against polluters/contaminators.

16  
17 In Decision No. 69912, dated September 27, 2007, the Commission approved LPSCO's  
18 request for an accounting order authorizing the deferral of costs associated with efforts to  
19 address the potential contamination of its water supply.

20  
21 **Q. If the Company deferred its legal and water testing costs pursuant to an approved  
22 Accounting order, why is Staff removing these costs?**

23 A. Per Decision No. 69912, dated September 27, 2007, Findings of Fact No. 11 expressly  
24 states that "the Company will pursue restitution from the party or parties responsible for  
25 the potential contamination of LPSCO's water supplies." Further in the ordering  
26 paragraph it states "that Litchfield Park Service Company shall actively assert the legal

1 remedies available to them from the party or parties responsible for the potential water  
2 contamination of their water supplies.”

3  
4 In data request JMM 7- 2, Staff asked what the Company has done to date to seek legal  
5 remedies from the party or parties responsible for the potential water contamination?

6  
7 **Q. What was the Company’s response?**

8 **A.** The Company responded:

9  
10 *LPSCO's increased water testing costs were done as a precaution and for*  
11 *the protection of the customers, in light of the advance of TCE that could*  
12 *impact its wells. LPSCO believes that this is the proper thing for a utility*  
13 *to do in circumstances such as these. Since there has not yet been damage*  
14 *to the wells, the PRP most likely does not have the obligation to pay.*  
15 *However, LPSCO will again approach the PRP (and EPA) and see if they*  
16 *will begin paying for future increased testing.*

17  
18 **Q. Has the Company taken any legal steps to recover fees association with increased**  
19 **water testing costs?**

20 **A.** No.

21  
22 **Q. Is it fair and equitable to have ratepayers pay a return on these deferred costs?**

23 **A.** No. The Company should recover these costs from the superfund polluter and not from  
24 rate payers, as stated in the Commission Decision.

25  
26 **Q. What is Staff’s recommendation?**

27 **A.** Staff recommends decreasing the Deferred Regulatory Costs by \$82,561 from \$82,561 to  
28 zero, as shown on Schedules JMM-W4 and JMM-W11. However, Staff recommends that  
29 the Company continue to track these costs separately.

1 **OPERATING INCOME – WATER DIVISION**

2 *Operating Income Summary*

3 **Q. What are the results of Staff’s analysis of test year revenues, expenses, and operating**  
4 **income?**

5 A. Staff’s analysis resulted in adjusted test year operating revenues of \$6,475,003, operating  
6 expenses of \$6,465,330 and operating income of \$9,673, as shown on Schedules JMM-  
7 W12 and JMM-W13. Staff made seven adjustments to operating expenses.

8  
9 *Operating Income Adjustment No. 1 – Water Division, Corporate Expense Allocation*

10 **Q. What is the Algonquin Power Income Fund (“Fund” or “APIF”)?**

11 A. The Algonquin Power Income Fund, the ultimate parent of LPSCO, is an unregulated  
12 company whose primary business activity is the acquisition and ownership of generation  
13 and infrastructure companies through security investments. At year-end 2007, APIF  
14 consisted of four main divisions as follows:

15

2007 Divisions		
	Types of Facilities in Divisions	No. of Facilities
1	Hydroelectric	41
2	Cogeneration – Equity Interest Only	2
	Cogeneration – Own/Operate	3
3	Alternative Fuels – Equity Interest Only	3
	Alternative Fuels – Own/Operate	5
4	Infrastructure (Water & Sewer)	17
	<b>Total Number of Facilities</b>	<b>71</b>

16

17 **Q. Please describe the position of LPSCO within APIF’s organizational structure.**

18 A. According to the organizational chart provided in response to a Staff data request,  
19 Algonquin Power Income Fund owns Algonquin Holdco, who in turn, owns Algonquin  
20 Power Fund Canada, who in turn, owns Algonquin Power Income Fund, who in turn,

1 owns Algonquin Power Fund America, who in turn, owns Algonquin Water Resources of  
2 America, who in turn, owns LPSCO.

3  
4 **Q. What is the primary goal of cost allocation between an unregulated affiliate and a**  
5 **regulated affiliate?**

6 A. The primary goal is the fair distribution of costs between the unregulated and regulated  
7 affiliate through proper allocations.

8  
9 **Q. What effect does improperly allocated costs have on rate payers?**

10 A. When costs incurred primarily for the benefit of an unregulated affiliate's business are  
11 improperly identified and allocated as overhead/common costs, then costs of the  
12 unregulated affiliate are shifted to the captive customers of the regulated utility. This cost  
13 shifting results in the captive customers of the regulated utility subsidizing the business  
14 operations of the unregulated affiliate and this harms customers by creating artificially  
15 higher rates. The costs of a regulated utility, such as LPSCO, should only include those  
16 costs that would have been incurred on a "stand-alone basis."

17  
18 **Q. What is the definition of "stand-alone basis"?**

19 A. "Stand-alone basis" means reflecting costs as if the regulated utility had produced the  
20 service by itself. This helps to ensure that any subsidization of the unregulated business  
21 by the captive utility customers is eliminated.

22  
23 **Q. What is the amount of expense that was allocated from the APIF unregulated**  
24 **business operations to LPSCO during the test year?**

25 A. LPSCO was allocated \$518,441 during the test year, of which \$250,979 was allocated to  
26 the water division and \$267,462 was allocated to the wastewater division.

1 **Q. How was the allocation to LSPCO made?**

2 A. First, \$3.95 million in expenses from the unregulated affiliate were allocated to the  
3 infrastructure division based on a single allocation factor of 26.98 percent.<sup>2</sup> Those costs  
4 were then allocated to each company within the infrastructure division based upon  
5 customer count.

6

7 **Q. Did Staff review the amounts comprising the \$3.95 million of expenses allocated from**  
8 **the unregulated affiliate to LPSCO?**

9 A. Yes.

10

11 **Q. Does Staff agree that all of the \$3.95 million in costs are costs that should be**  
12 **allocated?**

13 A. No, Staff does not. Staff reviewed the underlying invoices for the costs and determined  
14 that the Company did not identify the costs as direct costs (i.e., costs that can be identified  
15 with a particular service) or indirect costs (costs that cannot be identified with a particular  
16 service) consistent with the NARUC Guidelines for Cost Allocation and Affiliate  
17 Transactions. These guidelines require that the costs primarily attributable to a business  
18 operation should be, to the extent appropriate, directly assigned to that business operation.

19

20 **Q. What portion of the \$3.95 million did Staff determine was attributable to (i.e., direct**  
21 **costs of) APIF or an affiliate?**

22 A. Based upon review of the actual supporting invoices provided by the Company, Staff  
23 determined that almost all of the costs were obviously attributable to the operations of the  
24 APIF or one of its affiliates, therefore Staff assigned 90 percent of the costs to APIF. The

---

<sup>2</sup> This factor is based on the number of infrastructure facilities to total facilities.

1 remaining ten percent recognizes that the other affiliates receive a benefit from the  
2 common costs, and therefore, should be allocated a percentage greater than zero.

3  
4 **Q. Does Staff agree that all of the \$3.95 million of expenses allocated from the**  
5 **unregulated affiliate are allowable costs?**

6 A. No, Staff does not. As shown on schedule JMM-14, Page 2, Staff identified \$191,828 in  
7 unallowable costs. For example, Staff identified \$68,350 for charitable contributions,  
8 \$5,066 for season tickets for hockey games, \$3,500 for Superbowl tickets, \$16,864 for  
9 gold watches and clocks; and \$33,000 for IRS taxes and penalties related to the affiliate's  
10 unregulated business operations.

11  
12 **Q. Does Staff agree with the Company's calculation of the factor to allocate common**  
13 **costs?**

14 A. No, Staff does not.

15  
16 **Q. What allocation formula did the Company use to allocate common costs?**

17 A. The Company used the following formula:  $17 \text{ utilities} / 63 \text{ total facilities} = 26.98\%$ .

18  
19 **Q. Does Staff agree with the number of total facilities that the Company used in its**  
20 **formula?**

21 A. No, Staff does not. Staff attempted to match the number used in the formula to the  
22 information in the 2007 Algonquin Power Income Fund Annual Reports; however, the  
23 numbers did not agree. The information in the 2007 annual reports is as follows:

24

Line No	Type of Facility	Year-End 2007
1	Hydroelectric	41
2	Cogeneration – Equity Interest Only	2
3	Cogeneration – Own/Operate	3
4	Alternative Fuels – Equity Interest Only	3
5	Alternative Fuels – Own/Operate	5
6	Infrastructure (Water & Sewer)	17
7	<b>Total Number of Facilities</b>	<b>71</b>
8	<b>Allocation Percentage (1 / L7)</b>	<b>1.41%</b>

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18

**Q. What data does Staff recommend the Company use for its common cost allocation formula?**

A. Staff recommends that the year-end information per the Algonquin Power annual report be used to determine the number of total facilities.

**Q. Did Staff prepare a schedule of its recommended common costs and allocation factor?**

A. Yes, Staff's calculations are shown on Schedule JMM-W14.

**Q. What is Staff's recommendation?**

A. Staff recommends decreasing corporate allocation expense by \$250,182, from \$2,382,976 to \$2,132,794, as shown on Schedules JMM-W13 and JMM-W14.

*Operating Income Adjustment No. 2 – Water Division, Rate Case Expense*

**Q. Did Staff make an adjustment to rate case expense?**

A. Yes.

1 **Q. Why did Staff make this adjustment?**

2 A. Staff typically normalizes rate case expense over a three to five year period. The  
3 Company has not been in for a rate case in close to nine years, so Staff recommends  
4 normalizing the rate case expense over five years.

5  
6 **Q. What is Staff's recommendation?**

7 A. Staff recommends decreasing rate case expense by \$28,000, from \$70,000 to \$42,000, as  
8 shown on Schedules JMM-W13 and JMM-W15.

9  
10 *Operating Income Adjustment No. 3 – Water Division, Meals and Entertainment Expense*

11 **Q. Did Staff make an adjustment Meals and Entertainment expense?**

12 A. Yes.

13  
14 **Q. What adjustment did Staff make?**

15 A. Staff's adjustment decreased Meals and Entertainment Expense by \$827.

16  
17 **Q. Why did Staff make this adjustment?**

18 A. Meals and Entertainment are not necessary to the provision of water services.

19 **Q. What is Staff's recommendation?**

20 A. Staff recommends decreasing miscellaneous expense by \$827, from \$81,664 to \$80,837,  
21 as shown on Schedules JMM-W13 and JMM-W16.

22  
23 *Operating Income Adjustment No. 4 – Water Division, Bad Debt Expense*

24 **Q. Did Staff make an adjustment to bad debt expense?**

25 A. Yes.

26

1 **Q. Why did Staff make this adjustment?**

2 A. Bad Debt expenses for the water division were abnormally low in the test year and  
3 “between” years. As a result Staff normalized this amount over a three-year period.

4  
5 **Q. What is Staff’s recommendation?**

6 A. Staff recommends increasing bad debt expense by \$5,284 from \$3,264 to \$8,548 to better  
7 reflect the Company’s ongoing level of bad debt expense. Please see Schedules JMM-  
8 W13 and JMM-W17.

9  
10 *Operating Income Adjustment No.5 – Water Division, Depreciation Expense*

11 **Q. Did Staff make an adjustment to depreciation expense?**

12 A. Yes.

13  
14 **Q. What adjustment did Staff make?**

15 A. As a result of adjustments made to plant in service, Staff also adjusted the associated  
16 depreciation expense.

17  
18 **Q. What is Staff’s recommendation?**

19 A. Staff’s adjustment decreases depreciation expense by \$100,905 from \$2,291,982 to  
20 \$2,191,077. Please see Schedule JMM-W13 and JMM-W18 for Staff’s calculation.

21  
22 *Operating Income Adjustment No. 6 – Water Division, Property Tax*

23 **Q. Did Staff make an adjustment to property tax?**

24 A. Yes.

25

1 **Q. What adjustment does Staff recommend for test year property tax expense?**

2 A. Staff's adjustment decreased property tax expense by \$116,358, from \$373,338 to  
3 \$256,980, for test year expenses based upon Staff's adjusted test year revenues. Please  
4 see Schedule JMM-W13 and Column A on Schedule JMM-W19.

5  
6 **Q. What does Staff recommend for property tax expense on a going-forward basis?**

7 A. Staff recommends increasing property tax expense by \$71,012, from \$256,980 to  
8 \$327,992, based upon Staff's recommended revenues. Please see Schedule JMM-W12  
9 and Column B on Schedule JMM-W19.

10

11 *Operating Income Adjustment No .7 – Water Division, Income Tax*

12 **Q. Did Staff make an adjustment to Income Tax?**

13 A. Yes.

14

15 **Q. Why did Staff make this adjustment?**

16 A. Staff's adjustment reflects Staff's calculation of the income tax expense based upon  
17 Staff's adjusted test year taxable income, as shown on Schedule JMM-W20.

18

19 **Q. What is Staff's recommendation?**

20 A. Staff recommends increasing test year Income Tax Expense by \$198,423 from negative  
21 \$449,705 to negative \$251,282, as shown on Schedules JMM-W13 and JMM-W20.

22

1 **OTHER MATTERS**

2 *Low Income Tariff*

3 **Q. Is the Company proposing a low income tariff?**

4 A. Yes, this low income tariff is similar to the one devised for Chaparral City Water  
5 Company ("Chaparral"), Docket No. W-02113A-07-0551.

6  
7 **Q. Please describe the proposal.**

8 A. The Company is proposing that customers meeting the necessary qualifications would  
9 receive a 15 percent discount off their water bill.

10  
11 **Q. Did the Company provide an example of how the low income tariff would work?**

12 A. No. However, since the Company claims it is similar to the low income tariff approved in  
13 the Chaparral case, Staff assumes it works the same way. In that case, Chaparral stated,  
14 "Based on the existing bill for a median usage on a 3/4-inch meter currently at \$24.94, the  
15 low income program would result in a reduction of \$3.74," or 15 percent.

16  
17 **Q. What would be the primary factor in determining ratepayer eligibility for this  
18 program?**

19 A. The primary factor would be the combined gross income of all persons living in the  
20 household.

21  
22 **Q. How are the Company's gross annual house hold income limits determined?**

23 A. The Company's proposed income guidelines are based on 150 percent of the 2008 federal  
24 poverty guidelines.

25

1 **Q. Would these income guidelines be updated every year?**

2 A. Yes.

3

4 **Q. What are the draw backs to a low income tariff?**

5 A. All non-participants will subsidize the low income households in the Company's service  
6 area.

7

8 **Q. How will this be accomplished?**

9 A. Through a separate surcharge on the non-participant's bills identified as a "Low Income  
10 Assistance Charge."

11

12 **Q. Are there any other fees that would be included in this surcharge?**

13 A. Yes, the Company proposes to include a 10 percent fee for administration and carrying  
14 costs.

15

16 **Q. What is Staff's recommendation?**

17 A. Staff recommends approval of the low income tariff.

18

19 **HOOK-UP FEES**

20 **Q. Does the Company currently have hook-up fees?**

21 A. Yes, but only for its Wastewater Division.

22

23 **Q. Is the Company proposing hook-up fees for its Water Division in this case?**

24 A. Yes.

25

1 **Q. Is Staff recommending hook-up fees for the Company's Water Division?**

2 A. Yes, a complete analysis can be found in Staff's Engineering Report.

3

4 **FINANCINGS**

5 *Introduction*

6 On March 13, 2009, LPSCO submitted two financing applications to assist in funding  
7 certain capital projects. One project, under Docket No. W-01427A-09-0116 for the  
8 construction of two recharge wells, is estimated at \$1,755,000 and another project, under  
9 Docket No. W-01427A-09-0120 for the construction of a 200 kW roof mounted solar  
10 generator, is estimated at \$1,170,000. The Company is requesting approval of funding for  
11 these two projects through the use of Water Infrastructure Financing Authority ("WIFA")  
12 indebtedness with the Commission.

13

14 *Public Notice*

15 As of the date of this filing the Company has not provided notice to its customers of the  
16 proposed financings.

17

18 *Purpose and Terms of the Proposed Financing*

19 The purpose of the first long-term debt financing is to construct two recharge wells for the  
20 purpose of recharging effluent. This will aid in replenishment of the underlying aquifer  
21 within LPSCO's certificated service area as well as aid in disposal of excess effluent in an  
22 environmentally responsible manner.

23

24 The purpose of the second long-term debt financing is to construct one 200 kW roof  
25 mounted solar generator for the purposes of generating electrical power. This will aid in

1 lower electrical demands placed on the utility and further reduce rates while aiding in  
2 meeting Arizona Public Service renewable energy replenishment requirements.

3  
4 Staff examined the construction plans and estimated costs of the two projects and found  
5 them to be reasonable and appropriate. A complete discussion of the construction projects  
6 and costs are discussed in the attached Engineering Report.

7  
8 *Financial Analysis*

9 Staff has determined that the two projects are reasonable and appropriate and has  
10 completed a financial analysis to ensure that the Company will have the wherewithal to  
11 finance the new solar project and recharge well.

12  
13 Staff's analysis is based on the test year adjusted financial statements dated September 30,  
14 2008, and on its recommended rates. The financial analysis shown on Schedule JMM-  
15 W21 presents selected financial information from the financial statements, the pro forma  
16 effect of the proposed \$2,925,000 debt amount. Schedule JMM-W21 also shows the debt  
17 service coverage ("DSC") and the times interest earned ("TIER") ratio.

18  
19 *Interest and Debt Service Coverage*

20 Staff also examined the effects of the proposed financing on the Company's TIER and  
21 DSC.

22  
23 DSC represents the number of times internally generated cash (i.e. earnings before  
24 interest, income tax, depreciation and amortization expenses) cover required principle and  
25 interest payments on debt. A DSC greater than 1.0 means operating cash flow is sufficient  
26 to cover debt obligations.

1 TIER represents the number of times earnings before income tax expense covers interest  
2 expense on debt. A TIER greater than 1.0 means that operating income is greater than  
3 interest expense. A TIER less than 1.0 is not sustainable in the long term but does not  
4 necessarily mean that debt obligations cannot be met in the short term.

5  
6 The Company's TIER and DSC resulting from Staff's recommended revenue requirement  
7 and fully drawing both loans in the amount of \$2,925,000 results in a pro forma TIER and  
8 DSC of 5.58 and 5.94, respectively. The pro forma TIER and DSC show that LPSCO  
9 would have adequate cash flows to meet all obligations including the proposed debt.

10  
11 **CONCLUSIONS AND RECOMMENDATIONS**

12 Staff concludes that the capital projects in the amount of \$1,755,000 for a recharge well  
13 project and \$1,170,000 for a solar project are appropriate and the cost estimates are  
14 reasonable. No "used and useful" determination of the proposed project items were made  
15 and no particular treatment should be inferred for rate making or rate base purposes in the  
16 future.

17  
18 Staff recommends that the Company file with Docket Control, as a compliance item in the  
19 docket, by December 31, 2010, a copy of the Certificate for Approval to Construct for the  
20 recharge well project.

21  
22 **Q. Does this conclude your Direct Testimony?**

23 **A. Yes, it does.**

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY FAIR VALUE	(B) STAFF FAIR VALUE
1	Adjusted Rate Base	\$ 37,924,592	\$ 37,218,182
2	Adjusted Operating Income (Loss)	\$ (282,890)	\$ 9,673
3	Current Rate of Return (L2 / L1)	-0.75%	0.03%
4	Required Rate of Return	11.41%	8.70%
5	Required Operating Income (L4 * L1)	\$ 4,327,196	\$ 3,237,982
6	Operating Income Deficiency (L5 - L2)	\$ 4,610,086	\$ 3,228,309
7	Gross Revenue Conversion Factor	1.6286	1.6506
8	Required Revenue Increase (L7 * L6)	\$ 7,508,146	<b>\$ 5,328,747</b>
9	Adjusted Test Year Revenue	\$ 6,475,003	\$ 6,475,003
10	Proposed Annual Revenue (L8 + L9)	\$ 13,983,149	\$ 11,803,750
11	Required Increase in Revenue (%)	115.96%	82.30%

References:

Column (A): Company Schedule A-1

Column (B): Staff Schedules JMM-W3 and JMM-W12

**GROSS REVENUE CONVERSION FACTOR**

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<u>Calculation of Gross Revenue Conversion Factor:</u>					
1	Revenue	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	39.4171%			
5	Subtotal (L3 - L4)	60.5829%			
6	<b>Revenue Conversion Factor (L1 / L5)</b>	<b>1.650631</b>			
<u>Calculation of Uncollectible Factor:</u>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 23)	38.5989%			
9	One Minus Combined Income Tax Rate (L7 - L8 )	61.4011%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10)	0.0000%			
<u>Calculation of Effective Tax Rate:</u>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.9680%			
14	Federal Taxable Income (L12 - L13)	93.0320%			
15	Applicable Federal Income Tax Rate (Line 55)	34.0000%			
16	Effective Federal Income Tax Rate (L14 x L15)	31.6309%			
17	Combined Federal and State Income Tax Rate (L13 +L16)		38.5989%		
<u>Calculation of Effective Property Tax Factor</u>					
18	Unity	100.0000%			
19	Combined Federal and State Income Tax Rate (L17)	38.5989%			
20	One Minus Combined Income Tax Rate (L18-L19)	61.4011%			
21	Property Tax Factor (JMM-W18, L27)	1.3326%			
22	Effective Property Tax Factor (L20*L21)		0.8182%		
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			39.4171%	
24	Required Operating Income (Schedule JMM-W1, Line 5)	\$ 3,237,982			
25	Adjusted Test Year Operating Income (Loss) (Schedule JMM-W11, Line 35)	9,673			
26	Required Increase in Operating Income (L24 - L25)		\$ 3,228,309		
27	Income Taxes on Recommended Revenue (Col. [E], L52)	\$ 1,778,145			
28	Income Taxes on Test Year Revenue (Col. [B], L52)	(251,282)			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		2,029,427		
30	Recommended Revenue Requirement (Schedule JMM-W1, Line 10)	\$ 11,803,750			
31	Uncollectible Rate (Line 10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L30*L31)	\$ -			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32-L33)				
35	Property Tax with Recommended Revenue (JMM-W11, Col B, L31)	\$ 327,992			
36	Property Tax on Test Year Revenue (JMM-W18, Col A, L17)	256,980			
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		71,012		
38	Total Required Increase in Revenue (L26 + L29 + L34 + L37)		<b>\$ 5,328,747</b>		
<u>Calculation of Income Tax:</u>					
39	Revenue (Schedule JMM-W11, Col. [C], Line 5 & Sch. JMM-W1, Col. [D] Line 10)	\$ 6,475,003	\$ 5,328,747	\$ 11,803,750	
40	Operating Expenses Excluding Income Taxes	\$ 6,716,612		\$ 6,787,624	
41	Synchronized Interest (L56)	\$ 409,400		\$ 409,400	
42	Arizona Taxable Income (L39 - L40 - L41)	\$ (651,009)		\$ 4,606,726	
43	Arizona State Income Tax Rate	6.9680%		6.9680%	
44	Arizona Income Tax (L42 x L43)	\$ (45,362)		\$ 320,997	
45	Federal Taxable Income (L42 - L44)	\$ (605,647)		\$ 4,285,730	
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ (7,500)		\$ 7,500	
47	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ (6,250)		\$ 6,250	
48	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ (8,500)		\$ 8,500	
49	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ (91,650)		\$ 91,650	
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ (92,020)		\$ 1,343,248	
51	Total Federal Income Tax	\$ (205,920)		\$ 1,457,148	
52	Combined Federal and State Income Tax (L44 + L51)	\$ (251,282)		\$ 1,778,145	
53	Applicable Federal Income Tax Rate [Col. [E], L51 - Col. [B], L51] / [Col. [E], L45 - Col. [B], L45]			34.0000%	
<u>Calculation of Interest Synchronization:</u>					
54	Rate Base (Schedule JMM-W3, Col. (C), Line 17)	\$ 37,218,182			
55	Weighted Average Cost of Debt (Schedule JMM-WV19)	1.1000%			
56	Synchronized Interest (L45 X L46)	\$ 409,400			

RATE BASE - ORIGINAL COST

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	Adj. No.	(C) STAFF AS ADJUSTED
1	Plant in Service	\$ 73,731,815	1,2	\$ 73,671,740
2	Less: Accumulated Depreciation	9,107,141	3	9,071,918
3	Net Plant in Service	<u>\$ 64,624,674</u>		<u>\$ 64,599,822</u>
<u>LESS:</u>				
4	Contributions in Aid of Construction (CIAC)	\$ 3,104,068		\$ 3,096,180
5	Less: Accumulated Amortization	860,706		\$ 860,706
6	Net CIAC	<u>2,243,362</u>		<u>\$ 2,235,474</u>
7	Advances in Aid of Construction (AIAC)	24,583,673		24,574,996
8	Customer Deposits	68,685	4	235,683
9	Deferred Income Tax Credits	21,451	5	335,487
<u>ADD:</u>				
9	Unamortized Debt Issuance Costs	134,528	6	-
10	Deffered Regulatory Assets	82,561	7	-
11	<b>Original Cost Rate Base</b>	<u>\$ 37,924,592</u>		<u>\$ 37,218,182</u>

References:

Column [A]: Company as Filed

Column [B]: Schedule JMM-W4

Column (C): Column (A) + Column (B)



RATE BASE ADJUSTMENT NO. 1 - POST-TEST YEAR PLANT

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1		Post-Test Year Plant	\$ 1,866,965	\$ 18,805	\$ 1,885,770

Based on Staff Engineering Report Table I-1.

REFERENCES:

- Column [A]: Company Filing
- Column [B]: Direct Testimony JMM
- Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 2 - PLANT NOT USED AND USEFUL

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	304	Structures & Improvements	\$ 24,698,293	\$ (41,971)	\$ 24,656,322
2	311	Electric Pumping Equipment	948,213	(31,158)	917,055
3	339	Other Plant & Miscellaneous Equipment	265,281	(5,750)	259,531
4			<u>\$ 25,911,787</u>	<u>\$ (78,879)</u>	<u>25,832,908</u>

5

6 Based on Staff Engineering Report Table H-1.

7

8

9

10

11

12

13

14

DESCRIPTION	[A]	[B]	[C]
	COMPANY AIAC & CIAC AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
Advances in Aid of Construction (AIAC)	\$ 24,583,673	\$ (8,677)	\$ 24,574,996
Contributions in Aid of Construction (CIAC)	\$ 3,104,068	\$ (7,888)	\$ 3,096,180

REFERENCES:

Column [A]: Company Filing

Column [B]: Direct Testimony JMM

Column [C]: Column [A] + Column [B]

Litchfield Park Service Company - Water Division  
Docket No. W-01427A-09-0104  
Test Year Ended September 30, 2008

Schedule JMM-W7

**RATE BASE ADJUSTMENT NO. 3 - ACCUMULATED DEPRECIATION**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Accumulated Depreciation	\$ 9,107,141	\$ (35,223)	\$9,071,918

References:

Column [A]: Company Application

Column [B]: Testimony JMM

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 4 - CUSTOMER DEPOSITS

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1		Customer Deposits	\$ 68,685	\$ 166,998	\$ 235,683

Staff Calculation:

8600-2-0100-20-2117-0000 Hydrant Meter Deposits	\$	85,200
8600-2-0000-20-2113-0000 Customer Deposits		73,568
8600-2-0000-20-2112-0002 Customer Security Deposits		8,230
	\$	<u>166,998</u>

REFERENCES:

- Column [A]: Company Filing
- Column [B]: Direct Testimony JMM
- Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 5 - DEFERRED INCOME TAXES

LINE NO.	ACCT NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1		Deferred Income Taxes	\$ 21,451	\$ 314,036	\$ 335,487

To Remove Deferred Income Taxes

REFERENCES:

- Column [A]: Company Filing
- Column [B]: Direct Testimony JMM
- Column [C]: Column [A] + Column [B]

**RATE BASE ADJUSTMENT NO. 6 - UNAMORTIZED DEBT ISSUANCE COSTS**

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1		Unamortized Debt Issuance Costs	\$ 134,528	\$ (134,528)	\$ -

To Remove Unamortized Debt Issuance Costs

REFERENCES:

- Column [A]: Company Filing
- Column [B]: Direct Testimony JMM
- Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 7 - DEFERRED REGULATORY ASSETS

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1		Deferred Regulatory Assets	\$ 82,561	\$ (82,561)	\$ -

To remove Deferred Regulatory Assets

REFERENCES:

- Column [A]: Company Filing
- Column [B]: Direct Testimony JMM
- Column [C]: Column [A] + Column [B]

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COMPANY ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	Adj. No.	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
1	<b>REVENUES:</b>						
2	Metered Water Sales	\$ 6,347,481	\$ -		\$ 6,347,481	\$ 5,328,747	\$ 11,676,228
3	Water Sales-Unmetered	-	-		-	-	-
4	Other Operating Revenue	127,522	-		127,522	-	127,522
5	Intentionally Left Blank	-	-		-	-	-
6	<b>Total Operating Revenues</b>	<b>\$ 6,475,003</b>	<b>\$ -</b>		<b>\$ 6,475,003</b>	<b>\$ 5,328,747</b>	<b>\$ 11,803,750</b>
7							
8	<b>OPERATING EXPENSES:</b>						
9	Salaries and Wages	\$ -	\$ -		\$ -	\$ -	\$ -
10	Purchased Wastewater Treatment	5,011	-		5,011	-	5,011
11	Sludge Removal Expense	1,013,811	-		1,013,811	-	1,013,811
12	Purchased Power	58,147	-		58,147	-	58,147
13	Fuel for Power Production	503,278	-		503,278	-	503,278
14	Chemicals	44,001	-		44,001	-	44,001
15	Materials & Supplies	-	-		-	-	-
16	Contractual Services, Legal&Engr	12,469	-		12,469	-	12,469
17	Contractual Services - Other	2,382,976	(250,182)	1	2,132,794	-	2,132,794
18	Contractual Services - Testing	14,317	-		14,317	-	14,317
19	Equipment Rental	28,365	-		28,365	-	28,365
20	Rents - Building	10,647	-		10,647	-	10,647
21	Transportation	151,879	-		151,879	-	151,879
22	General Liability Insurance	95,469	-		95,469	-	95,469
23	Insurance - Other	3,319	-		3,319	-	3,319
24	Regulatory Commission/Rate Case Expense	63,662	-		63,662	-	63,662
25	Miscellaneous Expense	70,000	(28,000)	2	42,000	-	42,000
26	Bad Debt Expense	81,664	(827)	3	80,837	-	80,837
27	Bad Debt Expense	3,264	5,284	4	8,548	-	8,548
28	Depreciation Expense	2,291,982	(100,905)	5	2,191,077	-	2,191,077
29	Depreciation	-	-		-	-	-
30	Taxes other than Income	-	-		-	-	-
31	Property Taxes	373,338	(116,358)	6	256,980	71,012	327,992
32	Income Taxes	(449,705)	198,423	7	(251,282)	2,029,427	1,778,145
33	Intentionally Left Blank	-	-		-	-	-
34	<b>Total Operating Expenses</b>	<b>\$ 6,757,893</b>	<b>\$ (292,564)</b>		<b>\$ 6,465,330</b>	<b>\$ 2,100,439</b>	<b>\$ 8,565,768</b>
35	<b>Operating Income (Loss)</b>	<b>\$ (282,890)</b>	<b>\$ 292,564</b>		<b>\$ 9,673</b>	<b>\$ 3,228,309</b>	<b>\$ 3,237,982</b>

References:

Column (A): Company Schedule C-1  
Column (B): Schedule JMM-W12  
Column (C): Column (A) + Column (B)  
Column (D): Schedules JMM-W18 and JMM-W19  
Column (E): Column (C) + Column (D)

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] Corporate Expense Allocation ADJ #1	[C] Rate Case Expense ADJ #2	[D] Meals and Ent. Expense ADJ #3	[E] Bad Debt Expense ADJ #4	[F] Depreciation Expense ADJ #5	[G] Property Tax Expense ADJ #6	[H] Income Tax Expense ADJ #8	[I] STAFF ADJUSTED
		Ref: Sch JMM-W13	Ref: Sch JMM-W14	Ref: Sch JMM-W15	Ref: Sch JMM-W16	Ref: Sch JMM-W17	Ref: Sch JMM-W18	Ref: Sch JMM-W19		
1	REVENUES:									
2	Metered Water Sales	\$6,347,481								6,347,481
3	Water Sales-Unmetered	-								-
4	Other Operating Revenue	127,522								127,522
5	Intentionally Left Blank	-								-
6	Total Operating Revenues	\$6,475,003								6,475,003
7										
8	OPERATING EXPENSES:									
9	Salaries and Wages	\$								
10	Purchased Water	5,011								5,011
11	Purchased Power	1,013,811								1,013,811
12	Fuel for Power Production	58,147								58,147
13	Chemicals	503,278								503,278
14	Repairs and Maintenance	44,001								44,001
15	Office Supplies and Expense	-								-
16	Outside Services	12,469								12,469
17	Outside Services - Other	2,382,976	(250,182)							2,132,794
18	Outside Services - Legal	14,317								14,317
19	Water Testing	28,365								28,365
20	Rents	10,647								10,647
21	Transportation Expenses	151,879								151,879
22	Insurance - General Liability	95,469								95,469
23	Insurance - Health and Life	3,319								3,319
24	Regulatory Commission Expense	63,662								63,662
25	Regulatory Commission Expense	70,000								70,000
26	Miscellaneous Expense	81,664		(827)						80,837
27	Bad Debt Expense	3,264								3,264
28	Depreciation Expense	2,291,982				(100,905)				2,191,077
29	Amortization of CIAC	-								-
30	Taxes Other than Income	-								-
31	Property Taxes	373,338					(116,358)			256,980
32	Income Taxes	(449,705)							198,423	(251,282)
33	Intentionally Left Blank	-								-
34	Total Operating Expenses	\$6,757,893	(250,182)	(827)	5,284	(100,905)	(116,358)	198,423		6,465,330
35	Operating Income (Loss)	\$(282,890)	250,182	827	(5,284)	100,905	116,358	(198,423)		9,673

OPERATING INCOME ADJUSTMENT NO. 1 - EXPENSE ALLOCATIONS  
FROM UNREGULATED AFFILIATE

LINE NO.	DESCRIPTION	[A]	[B]	[C]								
		COMPANY AS FILED	STAFF ADJUSTMENTS (Col C - Col A)	STAFF AS ADJUSTED	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
1	Contractual Services - Other	\$ 2,357,032	\$ -	\$ 2,357,032								
2	Corporate Expense Allocation	250,979	(250,182)	797								
3	Total Contractual Services - Other	\$ 2,382,976	\$ (250,182)	\$ 2,357,829								
4												
5												
6												
7												
8	COSTS TO BE ALLOCATED TO LPSCO											
9												
10												
11	Description	Amount	Unallowable Costs	Direct Costs of Unregulated Affiliate(s)	Allowable Common Costs Allocated to All 71 Companies	Allocation <sup>5</sup> %	Costs to be Allocated to LPSCO (Col I x Col J)					
12												
13	Rent	\$ 430,739	\$ -	\$ (430,739)	\$ -	1.41%	\$ -					
14	Audit <sup>1</sup>	\$ 507,000	\$ -	\$ (456,300)	\$ 50,700	1.41%	\$ 714.08					
15	Tax Services <sup>2</sup>	\$ 265,000	\$ -	\$ (238,500)	\$ 26,500	1.41%	\$ 373.24					
16	Legal-General <sup>3</sup>	\$ 300,000	\$ -	\$ (284,400)	\$ 15,600	1.41%	\$ 219.72					
17	Other Professional Services	\$ 455,000	\$ -	\$ (455,000)	\$ -	1.41%	\$ -					
18	Management Fee	\$ 636,619	\$ -	\$ (636,619)	\$ -	1.41%	\$ -					
19	Unit Holder Communications	\$ 314,100	\$ -	\$ (314,100)	\$ -	1.41%	\$ -					
20	Trustee Fees	\$ 204,000	\$ -	\$ (204,000)	\$ -	1.41%	\$ -					
21	Office Costs	\$ 254,100	\$ (46,186)	\$ (207,914)	\$ -	1.41%	\$ -					
22	Licenses/Fees and Permits	\$ 305,000	\$ (145,642)	\$ (159,358)	\$ -	1.41%	\$ -					
23	Escrow and Transfer Fees	\$ 75,000	\$ -	\$ (75,000)	\$ -	1.41%	\$ -					
24	Depreciation Expense <sup>4</sup>	\$ 204,242	\$ -	\$ (183,818)	\$ 20,424	1.41%	\$ 287.66					
25		\$ 3,950,800	\$ (191,828)	\$ (3,645,748)	\$ 113,224		\$ 1,594.71					
26												
27												
28												
29												
30												
31	Foot Note 1: Audit - As the parent company's lenders require the APIF to have annual financial audits, Staff assigned the majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 71 companies/interests.											
32												
33												
34	Foot Note 2: Tax Services - Given the tax complexity of the APIF's many holdings and transactions, Staff assigned the majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 71 companies/interests.											
35												
36												
37	Foot Note 3: Legal, General - Staff reviewed the legal invoices and found that the very large majority of the legal invoices pertained to the APIF.											
38												
39												
40												
41	Foot Note 4: Depreciation Expense - Given that most of APIF's plant costs benefit primarily APIF, Staff assigned the majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 71 companies/interests.											
42												
43												
44	Foot Note 5: Allocation Percentage - Calculated as follows: 1 / 71 companies = 1.41%.											
45												

Water \$ 797.35  
Waste Water \$ 797.35  
\$ 1,594.71

References:

- Column A: Company Schedule
- Column B: Testimony JMM
- Column C: Column [A] + Column [B]

LINE NO.	Category	Description of Unallowable Cost	Amount
1	Office Fees and Expenses	Wind Analysis & Planning Software	\$15,056
2	Office Fees and Expenses	Gold Watches and Clocks	\$16,864
3	Office Fees and Expenses	Pilsner Beer Glasses	\$5,700
4	Office Fees and Expenses	Leafs-Raptors Season Tickets	\$5,066
5	Office Fees and Expenses	Super Bowl XLII Tickets	\$3,500
6		<b>Subtotal for Office Expenses</b>	<b>\$46,186</b>
7			
8	Licenses and Fees	Donation - Wind Project Develop	\$25,000
9	Licenses and Fees	Donation - Water Project in Africa	\$25,000
10	Licenses and Fees	Donation - Cancer Society	\$13,350
11	Licenses and Fees	Donation - Multiple Myeloma	\$5,000
12	Licenses and Fees	Wind Development	\$7,887
13	Licenses and Fees	U.S. Trustee	\$9,375
14	Licenses and Fees	St. Leon Wind Energy	\$12,556
15	Licenses and Fees	Algonquin Power Fund Inc Taxes	\$6,891
16	Licenses and Fees	Algonquin Power Fund Inc Taxes	\$6,794
17	Licenses and Fees	Tax Ruling Request for KMS America & Subs	\$10,000
18	Licenses and Fees	Algonquin Power Fund Inc Taxes	\$23,789
19		<b>Subtotal for Licenses &amp; Fees</b>	<b>\$145,642</b>
20			

**OPERATING INCOME ADJUSTMENT NO. 2 - RATE CASE EXPENSE**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	Rate Case Expense	\$ 70,000	\$ (28,000)	\$ 42,000

Staff Calculation:

Estimated Rate Case Cost	\$	210,000
Normalized Over Five Years		5
		<u>42,000</u>

References:

- Column (A), Company Schedule C-1
- Column (B): Testimony JMM
- Column (C): Column (A) + Column (B)

Litchfield Park Service Company - Water Division  
Docket No. W-01427A-09-0104  
Test Year Ended September 30, 2008

Schedule JMM-W16

OPERATING INCOME ADJUSTMENT NO. 3 - MEALS AND ENTERTAINMENT

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	775.00	Miscellaneous Expense	\$ 81,664	\$ (827)	\$ 80,837

References:

- Column (A), Company Schedule C-1
- Column (B): Testimony JMM
- Column (C): Column (A) + Column (B)

Litchfield Park Service Company - Water Division  
 Docket No. W-01427A-09-0104  
 Test Year Ended September 30, 2008

Schedule JMM-W17

OPERATING INCOME ADJUSTMENT NO. 4 - BAD DEBT

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1		Bad Debt Expense	\$ 3,264	\$ 5,284	\$ 8,548

Staff Calculation:

Test Year	\$3,264
2007	1,898
2006	20,483
	<u>\$25,645</u>
Normalized over 3 years	3
	<u>\$ 8,548</u>

References:

Column (A), Company Schedule C-1  
 Column (B): Testimony JMM  
 Column (C): Column (A) + Column (B)

OPERATING INCOME ADJUSTMENT NO. 5 - DEPRECIATION EXPENSE ON TEST YEAR PLANT

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]	[D]	[E]
			PLANT In SERVICE Per Staff	NonDepreciable or Fully Depreciated PLANT	DEPRECIABLE PLANT (Col A - Col B)	DEPRECIATION RATE	DEPRECIATION EXPENSE (Col C x Col D)
1	301	Organization Cost	\$ 100	\$ 100	\$ -	0.00%	\$ -
2	302	Franchise Cost	\$ -	\$ -	\$ -	0.00%	\$ -
3	303	Land and Land Rights	\$ 1,284,595	1,284,595	\$ -	0.00%	\$ -
4	304	Structures and Improvements	\$ 24,656,322	\$ -	\$ 24,656,322	3.33%	\$ 821,056
5	305	Collecting and Impounding Res.	\$ -	\$ -	\$ -	2.50%	\$ -
6	306	Lake River and Other Intakes	\$ -	\$ -	\$ -	2.50%	\$ -
7	307	Wells and Springs	\$ 2,382,102	\$ -	\$ 2,382,102	3.33%	\$ 79,324
8	308	Infiltration Galleries and Tunnels	\$ -	\$ -	\$ -	6.67%	\$ -
9	309	Supply Mains	\$ -	\$ -	\$ -	2.00%	\$ -
10	310	Power Generation Equipment	\$ 202,269	\$ -	\$ 202,269	5.00%	\$ 10,113
11	311	Electric Pumping Equipment	\$ 917,055	\$ -	\$ 917,055	12.50%	\$ 114,632
12	320	Water Treatment Equipment	\$ 1,337,824	\$ -	\$ 1,337,824	3.33%	\$ 44,550
13	320	Water Treatment Plant	\$ -	\$ -	\$ -	3.33%	\$ -
14	330	Distribution Reservoirs & Standpipe	\$ 430,644	\$ -	\$ 430,644	2.22%	\$ 9,560
15	331	Transmission and Distribution Mains	\$ 28,929,171	\$ -	\$ 28,929,171	2.00%	\$ 578,583
16	333	Services	\$ 4,249,744	\$ -	\$ 4,249,744	3.33%	\$ 141,516
17	334	Meters	\$ 4,138,752	\$ -	\$ 4,138,752	8.33%	\$ 344,758
18	335	Hydrants	\$ 2,055,781	\$ -	\$ 2,055,781	2.00%	\$ 41,116
19	336	Backflow Prevention Devices	\$ 38,387	\$ -	\$ 38,387	6.67%	\$ 2,560
20	339	Other Plant and Miscellaneous Equipment	\$ 259,531	\$ -	\$ 259,531	6.67%	\$ 17,311
21	340	Office Furniture and Fixtures	\$ 551,757	\$ -	\$ 551,757	6.67%	\$ 36,802
22	341	Transportation Equipment	\$ 177,165	\$ -	\$ 177,165	20.00%	\$ 35,433
23	342	Stores Equipment	\$ 31,711	\$ -	\$ 31,711	4.00%	\$ 1,268
24	343	Tools and Work Equipment	\$ 23,350	\$ -	\$ 23,350	5.00%	\$ 1,168
25	344	Laboratory Equipment	\$ -	\$ -	\$ -	10.00%	\$ -
26	345	Power Operated Equipment	\$ -	\$ -	\$ -	5.00%	\$ -
27	346	Communications Equipment	\$ 119,710	\$ -	\$ 119,710	10.00%	\$ 11,971
28	347	Miscellaneous Equipment	\$ -	\$ -	\$ -	10.00%	\$ -
29	348	Other Tangible Plant	\$ -	\$ -	\$ -	10.00%	\$ -
30		Total Plant	\$ 71,785,970	\$ 1,284,695	\$ 70,501,275		\$ 2,291,721
31							
32		Composite Depreciation Rate (Depr Exp / Depreciable Plant):	3.25%				
33		CIAC: \$	3,096,180				
34		Amortization of CIAC (Line 32 x Line 33): \$	100,645				
35							
36		Depreciation Expense Before Amortization of CIAC: \$	2,291,721				
37		Less Amortization of CIAC: \$	100,645				
38		<b>Test Year Depreciation Expense - Staff: \$</b>	<b>2,191,077</b>				
39		Depreciation Expense - Company: \$	2,291,982				
40		<b>Staff's Total Adjustment: \$</b>	<b>(100,905)</b>				

References:

- Column [A]: Schedule JMM-W4
- Column [B]: From Column [A]
- Column [C]: Column [A] - Column [B]
- Column [D]: Engineering Staff Report
- Column [E]: Column [C] x Column [D]

**OPERATING INCOME ADJUSTMENT #12 - Property Tax Expense**

LINE NO.	Property Tax Calculation	[A]	[B]
		STAFF AS ADJUSTED	STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$ 6,475,003	\$ 6,475,003
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	12,950,006	\$ 12,950,006
4	Staff Recommended Revenue, Per Schedule JMM-W1	6,475,003	\$ 11,803,750
5	Subtotal (Line 4 + Line 5)	19,425,009	24,753,756
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	6,475,003	\$ 8,251,252
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	12,950,006	\$ 16,502,504
10	Plus: 10% of CWIP -	-	-
11	Less: Net Book Value of Licensed Vehicles	94,101	\$ 94,101
12	Full Cash Value (Line 9 + Line 10 - Line 11)	12,855,905	\$ 16,408,403
13	Assessment Ratio	21.0%	21.0%
14	Assessment Value (Line 12 * Line 13)	2,699,740	\$ 3,445,765
15	Composite Property Tax Rate (Per Company Schedule)	9.5187%	9.5187%
16			\$ -
17	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$ 256,980	
18	Company Proposed Property Tax	373,338	
19			
20	Staff Test Year Adjustment (Line 16-Line 17)	\$ (116,358)	
21	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 327,992
22	Staff Test Year Adjusted Property Tax Expense (Line 16)		\$ 256,980
23	Increase in Property Tax Expense Due to Increase in Revenue Requirement		\$ 71,012
24			
25	Increase to Property Tax Expense		\$ 71,012
26	Increase in Revenue Requirement		5,328,747
27	Increase to Property Tax per Dollar Increase in Revenue (Line 19/Line 20)		1.332618%

OPERATING INCOME ADJUSTMENT NO. 13 - TEST YEAR INCOME TAXES

LINE NO.	<u>DESCRIPTION</u>	
1		
2		
3		
4	<u>Calculation of Income Tax:</u>	<u>Test Year</u>
5	Revenue (Schedule JMM-11)	\$ 6,475,003
6	Operating Expenses Excluding Income Taxes	\$ 6,716,612
7	Synchronized Interest (L17)	\$ 409,400
8	Arizona Taxable Income (L1 - L2 - L3)	\$ (651,009)
9	Arizona State Income Tax Rate	6.9680%
10	Arizona Income Tax (L4 x L5)	\$ (45,362)
11	Federal Taxable Income (L4 - L6)	\$ (605,647)
12	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ (7,500)
13	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ (6,250)
14	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ (8,500)
15	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ (91,650)
16	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ (92,020)
17	Total Federal Income Tax	\$ (205,920)
18	Combined Federal and State Income Tax (L44 + L51)	<u>\$ (251,282)</u>
19		
20		
21	<u>Calculation of Interest Synchronization:</u>	
22	Rate Base (Schedule JMM-W4)	\$ 37,218,182
23	Weighted Average Cost of Debt	1.10%
24	Synchronized Interest (L16 x L17)	<u>\$ 409,400</u>
25		
26		
27		
28	Income Tax - Per Staff	\$ (251,282)
29	Income Tax - Per Company	\$ (449,705)
	<b>Staff Adjustment</b>	<b>\$ 198,423</b>

**FINANCIAL ANALYSIS**

Selected Financial Information  
Pro forma Includes Immediate Effects of the Proposed Long-term Debt

	[A] 9/30/2008 Test Year Operating Results Without Loan		[B] 11/4/2009 With Staff Recommended Operating Income and Staff Recommended Loan Amount of \$2,925,000 Pro Forma	
1 Operating Income/(Loss)	\$ 9,673		\$ 3,237,982	
2 Depreciation Expense	2,191,077		2,191,077	
3 Income Tax Expense	(251,282)		1,778,145	
4 Interest Expense	747,446	<b>Note 1</b>	898,983	<b>Note 3</b>
5 Principal Repayment	230,000	<b>Note 2</b>	314,982	<b>Note 4</b>

**TIER & DSC Calculation**

<b>TIER</b>				
6	[1+3] + [4]	-0.32		5.58
<b>DSC</b>				
7	[1+2+3] + [4+5]	1.99		5.94

**Note 1:** This information was taken from the Company's 2008 annual report:

1999 IDA Loan Interest	\$ 256,782
2001 IDA Loan Interest	490,664
Total	<u>\$ 747,446</u>

**Note 2:** This information was taken from the Company's 2008 annual report:

1999 IDA Loan Principle	\$ 170,000
2001 IDA Loan Principle	60,000
Total	<u>\$ 230,000</u>

**Note 3:** This pro-forma information is based on a 20 year WIFA loan at 5.25 percent annual interest:

Total Interest of Old Loans	\$ 747,446
Interest on New Loans	151,537
	<u>\$ 898,983</u>

**Note 4:** This pro-forma information is based on a 20 year WIFA loan at 5.25 percent annual interest:

Total Principle of Old Loans	\$ 230,000
Principle on New Loans	84,982
	<u>\$ 314,982</u>

BEFORE THE ARIZONA CORPORATION COMMISSION

KRISTIN K. MAYES  
Chairman  
GARY PIERCE  
Commissioner  
PAUL NEWMAN  
Commissioner  
SANDRA D. KENNEDY  
Commissioner  
BOB STUMP  
Commissioner

IN THE MATTER OF THE APPLICATION OF )  
LITCHFIELD PARK SERVICE COMPANY, )  
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 )  
SERVICES BASED THEREON )  
\_\_\_\_\_ )

DOCKET NO. SW-01428A-09-0103

DIRECT  
TESTIMONY  
OF  
JEFFREY M. MICHLIK  
PUBLIC UTILITIES ANALYST V  
UTILITIES DIVISION  
ARIZONA CORPORATION COMMISSION

NOVEMBER 4, 2009

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**EXECUTIVE SUMMARY  
LITCHFIELD PARK SERVICE COMPANY  
DOCKET NO. SW-01428A-09-0103**

Litchfield Park Service Company – Wastewater Division (“LPSCO or Company”) is an Arizona “C” Corporation. Its principal place of business is 12725 W. Indian School Road, Suite D-101, Avondale, Arizona. The Company is engaged in the business of providing wastewater utility services in its certificated areas in portions of Pinal County, Arizona. The Company served approximately 14,600 wastewater customers during the test year ended September 30, 2008. The Company’s current rates were approved in Decision No. 65436, dated December 9, 2002.

**Rate Application:**

The Company proposes rates that would increase operating revenues by \$4,991,601 to produce operating revenue of \$11,347,975 resulting in operating income of \$3,228,677, or a 78.53 percent increase over test year revenue of \$6,356,374. The Company also proposes a fair value rate base (“FVRB”) of \$28,296,903 which is its original cost rate base (“OCRB”), and a 11.41 percent rate of return on the FVRB.

Staff recommends rates that would increase operating revenue by \$2,841,618 to produce operating revenue of \$9,197,992 resulting in operating income of \$2,390,091, or a 44.71 percent increase over adjusted test year revenue of \$6,356,374. Staff recommends an OCRB of \$27,472,314 which is its FVRB, and an 8.70 percent rate of return on the FVRB.

1 **INTRODUCTION**

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

3 A. My name is Jeffrey M. Michlik. I am a Public Utilities Analyst V employed by the  
4 Arizona Corporation Commission (“ACC” or “Commission”) in the Utilities Division  
5 (“Staff”). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.  
6

7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst V.**

8 A. In my capacity as a Public Utilities Analyst V, I analyze and examine accounting,  
9 financial, statistical and other information and prepare reports based on my analyses that  
10 present Staff’s recommendations to the Commission on utility revenue requirements, rate  
11 design and other matters. I also provide expert testimony on these same issues.  
12

13 **Q. Please describe your educational background and professional experience.**

14 A. In 2000, I graduated from Idaho State University, receiving a Bachelor of Business  
15 Administration Degree in Accounting and Finance, and I am a Certified Public  
16 Accountant with the Arizona State Board of Accountancy. I have attended the National  
17 Association of Regulatory Utility Commissioners’ (“NARUC”) Utility Rate School,  
18 which presents general regulatory and business issues.  
19

20 I joined the Commission as a Public Utilities Analyst in May of 2006. Prior to  
21 employment with the Commission, I worked four years for the Arizona Office of the  
22 Auditor General as a Staff Auditor, and one year in public accounting as a Senior Auditor.  
23

24 **Q. What is the scope of your testimony in this case?**

25 A. I am presenting Staff’s analysis and recommendations regarding Litchfield Park Service  
26 Company’s (“LPSCO” or “Company”) application for a permanent increase in its rates

1 and charges for wastewater utility service within Maricopa County, Arizona. I am  
2 presenting testimony and schedules addressing rate base, operating revenues and  
3 expenses, and revenue requirement. Staff witness Pedro Chavez is presenting Staff's rate  
4 design. Staff witness Juan Manrique is presenting Staff's cost of capital. Mr. Marlin Scott  
5 Jr. is presenting Staff's engineering analysis and related recommendations.

6  
7 **Q. What is the basis of your testimony in this case?**

8 A. I performed a regulatory audit of the Company's application and records. The regulatory  
9 audit consisted of examining and testing financial information, accounting records, and  
10 other supporting documentation and verifying that the accounting principles applied were  
11 in accordance with the Commission-adopted NARUC Uniform System of Accounts  
12 ("USOA").

13  
14 **BACKGROUND**

15 **Q. Please review the background of this application.**

16 A. The Company is an Arizona "C" Corporation. Its principal place of business is 12725 W.  
17 Indian School Road, Suite D-101, Avondale, Arizona. The Company is engaged in the  
18 business of providing wastewater utility services in its certificated areas in portions of  
19 Maricopa County, Arizona. The Company served approximately 14,600 wastewater  
20 customers during the test year ended September 30, 2008. The Company's current rates  
21 were approved in Decision No. 65436, dated December 9, 2002.

22  
23 The Company is a wholly owned subsidiary of Algonquin Water Resources. Algonquin  
24 Water Resources is the Company's only shareholder. Algonquin Water Resources is a

1 wholly owned subsidiary of Algonquin Power Income Fund<sup>1</sup> (Algonquin Water Resources  
2 and Algonquin Power Income Fund are collectively referred to as “Algonquin”).

3  
4 In addition to LPSCO, Algonquin owns seven other companies located in Arizona: Black  
5 Mountain Sewer Company, Gold Canyon Sewer Company, Rio Rico Utilities, Inc.,  
6 Entrada Del Oro Sewer Company, Northern Sunrise Water Company, Inc., Southern  
7 Sunrise Water Company, Inc., and Bella Vista Water Company. Algonquin has a contract  
8 to manage and operate Black Mountain. Algonquin also owns and/or operates utility  
9 systems in Illinois and Texas.

10  
11 **CONSUMER SERVICES**

12 **Q. Please provide a brief history of customer complaints received by the Commission**  
13 **regarding the Company. Additionally, please discuss customer responses to the**  
14 **Company’s proposed rate increase.**

15 **A.** A review of the Commission’s Consumer Services database for the Company from  
16 January 1, 2006, through October 14, 2009, revealed the following for the Wastewater  
17 Division:

18  
19 2006 – Five complaints (one billing, one service, one quality of service, two  
20 disconnect/termination), zero inquiries, and zero opinions. 2007 – Six complaints (one  
21 deposit, three quality of service, one disconnect/termination, one rates/tariffs), two  
22 inquiries (service, quality of service), and three opinions (quality of service). 2008 – Zero  
23 complaints, inquiries or opinions. Three complaints (one billing, two quality of service),

---

<sup>1</sup> Algonquin Power Income Fund is an investment trust that owns or has interests in 71 companies in the United States and Canada, including 41 hydroelectric facilities, 5 natural gas cogeneration facilities, and 15 water and sewer facilities.

1 zero inquiries, and thirteen opinions, (rate case all opposed). All complaints and inquiries  
2 have been resolved and closed.

3  
4 **COMPLIANCE**

5 **Q. Please provide a summary of the compliance status of the Company.**

6 A. A check of the ACC's Compliance database indicates that there are currently no  
7 delinquencies for the Company.

8  
9 **SUMMARY OF FILING, RECOMMENDATIONS, AND ADJUSTMENTS**

10 **Q. Please summarize the Company's proposals in this filing.**

11 A. The Company proposes rates that would increase operating revenues by \$4,991,601 to  
12 produce operating revenue of \$11,347,975 resulting in operating income of \$3,228,677, or  
13 a 78.53 percent increase over test year revenue of \$6,356,374. The Company also  
14 proposes a fair value rate base ("FVRB") of \$28,296,903 which is its original cost rate  
15 base ("OCRB"), and an 11.41 percent rate of return on the FVRB.

16  
17 **Q. Please summarize Staff's recommendations.**

18 A. Staff recommends rates that would increase operating revenue by \$2,841,618 to produce  
19 operating revenue of \$9,197,992 resulting in operating income of \$2,390,091, or a 44.71  
20 percent increase over adjusted test year revenue of \$6,356,374. Staff recommends an  
21 OCRB of \$27,472,314 which is its FVRB, and an 8.70 percent rate of return on the FVRB.

22  
23 **Q. What test year did the Company use in this filing?**

24 A. The Company's rate filing is based on the twelve months ended September 30, 2008 ("test  
25 year").

26

1 **Q. Please summarize the rate base adjustments addressed in your testimony.**

2 A. My testimony addresses the following issues:

3  
4 Plant Not Used and Useful – This adjustment decreases Plant in Service by \$554,977 to  
5 remove plant that was deemed not used and useful, and the associated funding sources in  
6 the amount \$110,995.

7  
8 Transfer of Plant – This adjustment removes Plant in the amount of \$38,625, and  
9 accumulated depreciation in the amount of \$11,148.

10  
11 Accumulated Depreciation – This adjustment decreases accumulated depreciation by  
12 \$182,696 based upon the adjustments Staff made to plant in service.

13  
14 Customer Deposits – This adjustment increases customer deposits by \$81,798 to include  
15 customer deposits.

16  
17 Deferred Income Taxes – This adjustment increases Deferred Income Taxes by \$319,500  
18 to reverse the Company's pro-forma adjustment.

19  
20 Unamortized Debt Issuance Costs – This adjustment removes Unamortized Debt Issuance  
21 Costs in the amount of \$134,528.

22  
23 **Q. Please summarize the operating revenue and expense adjustments addressed in your**  
24 **testimony.**

25 A. My testimony addresses the following issues:

1           Materials and Supplies – This adjustment removes \$5,975 for beverages that were  
2 included in materials and supplies expense.

3  
4           Corporate Expense Allocation – This adjustment decreases operating expenses by  
5 \$266,665 to remove costs incurred related to the unregulated parent’s business operations.

6  
7           Rate Case Expense – This adjustment decreases rate case expense by \$28,000 to reflect  
8 Staff’s normalization over five years.

9  
10          Meals and Entertainment Expense – This adjustment removes expenses in the amount of  
11 \$494 for meals and entertainment.

12  
13          Bad Debt Expense – This adjustment decreases bad debt expenses by \$21,791 to reflect  
14 the Staff’s normalization of bad debt expense.

15  
16          Depreciation Expense – This adjustment decreases expenses by \$264,954 to adjust  
17 depreciation based on Staff’s plant in service numbers.

18  
19          Property Tax Expense – This adjustment decreases expenses by \$225,740 to adjust  
20 property taxes to Staff’s adjusted test year amount.

21  
22          Income Tax Expense – This adjustment increases expenses by \$321,964 to adjust income  
23 taxes to Staff’s adjusted test year amount.

24

1 **RATE BASE – WASTEWATER DIVISION**

2 *Fair Value Rate Base*

3 **Q. Did the Company prepare a schedule showing the elements of Reconstruction Cost**  
4 **New Rate Base?**

5 A. No, the Company did not. The Company's filing treats the OCRB the same as the FVRB.

6  
7 *Rate Base Summary*

8 **Q. Please summarize Staff's adjustments to the Company's rate base shown on**  
9 **Schedules JMM-WW3 and JMM-WW4.**

10 A. Staff's adjustments to the Company's rate base resulted in a net decrease of \$824,589,  
11 from \$28,296,903 to \$27,472,314. This decrease was primarily due to: (1) removal of  
12 plant that was not serving customers during the test year, (2) transfer of plant, (3)  
13 adjustment to accumulated depreciation, (4) adjustment to customer deposits, (5)  
14 adjustment to deferred income taxes, and (6) removal of unamortized debt issuance costs.

15  
16 *Rate Base Adjustment No. 1 – Wastewater Division, Plant Not Used and Useful*

17 **Q. Did Staff make an adjustment to plant that was not used and useful?**

18 A. Yes.

19  
20 **Q. What adjustment did Staff make?**

21 A. Staff identified \$554,977 in plant that was not used and useful as shown on Schedule  
22 JMM-WW5.

23

1 **Q. Why did Staff make this adjustment?**

2 A. Marlin Scott, Jr., Staff's Engineer, inspected the entire system and identified certain  
3 individual plant items that were not serving customers during the test year (See Staff  
4 Engineering Report, Section H, Plant Not Used and Useful).

5  
6 **Q. What is Staff's recommendation?**

7 A. Staff recommends decreasing plant in service by \$554,997, from \$60,394,260 to  
8 \$59,839,283 to remove all plant from rate base that was not used and useful and the  
9 associated funding sources; Advances in Aid of Construction in the amount of \$16,649  
10 from \$7,006,208 to \$6,989,559 and Contributions in Aid of Construction in the amount of  
11 \$94,346 from \$18,737,132 to \$18,642,786, as shown on Schedules JMM-WW4 and JMM-  
12 WW5.

13  
14 *Rate Base Adjustment No. 2 – Wastewater Division, Transfer of Plant*

15 **Q. Did Staff make an adjustment to remove a plant item from plant in service that was**  
16 **transferred to another Company?**

17 A. Yes.

18  
19 **Q. Why did Staff make this adjustment?**

20 A. Based on Staff data request JMM 6-2, the Company indicated that an odor control unit had  
21 been transferred from LPSCO to Black Mountain Sewer Company.

22  
23 **Q. What is Staff's recommendation?**

24 A. Staff recommends decreasing plant in service by \$38,625, from \$59,839,283 to  
25 \$59,800,658, by removing the odor control unit; and the associated accumulated

1 depreciation by \$11,148, from \$8,475,991 to \$8,464,843, as shown on Schedules JMM-  
2 WW4 and JMM-WW6.

3  
4 *Rate Base Adjustment No. 3 – Wastewater Division, Accumulated Depreciation*

5 **Q. Did Staff make an adjustment to Accumulated Depreciation?**

6 A. Yes.

7  
8 **Q. Why did Staff make this adjustment?**

9 A. Staff adjusted accumulated depreciation to reflect the Staff-recommended plant balances  
10 adjusted to remove not used and useful plant.

11  
12 **Q. What is Staff's recommendation?**

13 A. Staff recommends decreasing accumulated depreciation by \$182,696, from \$8,464,843 to  
14 \$8,282,147, as shown on Schedules JMM-WW4 and JMM-WW7.

15  
16 *Rate Base Adjustment No. 4 – Wastewater Division, Customer Deposits*

17 **Q. Did Staff make an adjustment to customer deposits?**

18 A. Yes.

19  
20 **Q. What adjustment did Staff make?**

21 A. Staff increased Customer Deposits by \$81,798.

22  
23 **Q. Why did Staff make this adjustment?**

24 A. Based on the Company's response to Staff data request JMM 1.56, Staff identified  
25 Customer Deposits in the test year that were not included in the rate application.

1           Specifically, the Company only included customer meter deposits and no other Customer  
2           Deposits.

3  
4           **Q.     What is Staff's recommendation?**

5           A.     Staff recommends increasing Customer Deposits by \$81,798, from \$68,685 to \$150,483 as  
6           shown on Schedules JMM-WW4 and JMM-WW8.

7  
8           *Rate Base Adjustment No. 5 – Wastewater Division, Deferred Income Taxes and Credits*

9           **Q.     Did Staff make an adjustment to plant for Deferred Income Taxes and Credits?**

10          A.     Yes.

11  
12          **Q.     What adjustment did Staff make?**

13          A.     Staff reversed the Company's pro-forma adjustment.

14  
15          **Q.     What are pro-forma adjustments?**

16          A.     Pro-forma adjustments are adjustments to actual test year results and balances to obtain a  
17          normal or more realistic relationship between revenues, expenses and rate base.

18  
19          **Q.     Does the Company's adjustment provide a normal or more realistic relationship  
20          between revenues, expenses and rate base?**

21          A.     No. It is one-sided, as it only includes elimination of the current liability in the future; it  
22          does not take into account the Company's future tax returns that may increase or decrease  
23          the deferred tax liability account.

24

1 **Q. What is a deferred tax liability?**

2 A. A deferred tax liability represents the increase in taxes payable in future years as a result  
3 of taxable temporary differences existing at the end of the current year.

4  
5 **Q. Will this taxable temporary difference reverse out at some future date?**

6 A. Yes, however we do not know at what date, so it is not known and measurable.

7  
8 **Q. What is Staff's recommendation?**

9 A. Staff recommends reversal of the Company's adjustment by increasing Deferred Income  
10 Taxes by \$319,500, from \$15,987 to \$335,487, as shown on Schedules JMM-WW4 and  
11 JMM-WW9.

12  
13 **Q. Does Staff have any other comments on the Company's Deferred Income Taxes and  
14 Credits?**

15 A. Yes.

16  
17 **Q. Was Staff able to verify the amount of Deferred Income Taxes and Credits of  
18 \$335,487 before the pro-forma adjustment?**

19 A. No. Staff attempted to do so in data requests JMM 1.55, JMM 2.3, JMM 9.1 and JMM  
20 9.2. The Company was either unwilling or unable to provide Staff with this  
21 documentation.

22  
23 *Rate Base Adjustment No. 6 – Wastewater Division, Unamortized Debt Issuance Costs*

24 **Q. Did Staff make an adjustment to Unamortized Debt Issuance Costs?**

25 A. Yes.

26

1 **Q. What adjustment did Staff make?**

2 A. Staff removed the Unamortized Debt Issuance Costs.

3

4 **Q. Why did Staff disallow the Unamortized Debt Issuance Costs from being included in**  
5 **rate base?**

6 A. Debt issuance costs are a "below the line" expense, similar to interest and, thus, should be  
7 paid from the return on rate base portion of the ratepayer charges. The unamortized debt  
8 issuance costs are therefore attributed to the shareholders and do not require an outlay of  
9 cash by the shareholders. Consequently, from a ratemaking standpoint, shareholders  
10 should not earn a return on such costs and the costs should not be included in rate base.

11

12 **Q. Do you have a Commission authoritative reference?**

13 A. Yes. In Decision No. 71308, the Commission agreed that Unamortized Debt Issuance  
14 Costs should not be included in rate base.

15

16 **Q. What is Staff's recommendation?**

17 A. Staff recommends decreasing Unamortized Debt Issuance Costs by \$134,528, from  
18 \$134,528 to zero, as shown on Schedules JMM-WW4 and JMM-WW10.

19

20 **OPERATING INCOME – WASTEWATER DIVISION**

21 *Operating Summary*

22 **Q. What are the results of Staff's analysis of test year revenues, expenses, and operating**  
23 **income?**

24 A. Staff's analysis resulted in adjusted test year operating revenues of \$6,356,374, operating  
25 expenses of \$5,700,941 and operating income of \$655,433, as shown on Schedules JMM-  
26 WW11 and JMM-WW12. Staff made eight adjustments to operating expenses.

1 *Operating Income Adjustment No. 1 – Wastewater Division, Materials and Supplies*

2 **Q. Did Staff make an adjustment to materials and supplies?**

3 A. Yes.

4  
5 **Q. What adjustment did Staff make and why?**

6 A. To remove beverage expenses that were included in materials and supplies expense in the  
7 amount of \$5,975.

8  
9 **Q. What is Staff's recommendation?**

10 A. Staff recommends decreasing materials and supplies expense by \$5,975, from \$75,579 to  
11 \$69,604, as shown in Schedules JMM-WW12 and JMM-WW13.

12  
13 *Operating Income Adjustment No. 2 – Wastewater Division, Corporate Expense Allocation*

14 **Q. What is the Algonquin Power Income Fund ("Fund" or "APIF")?**

15 A. The Algonquin Power Income Fund, the ultimate parent of LPSCO, is an unregulated  
16 company whose primary business activity is the acquisition and ownership of generation  
17 and infrastructure companies through security investments. At year-end 2007, APIF  
18 consisted of four main divisions as follows:

19

2007 Divisions		
	Types of Facilities in Divisions	No. of Facilities
1	Hydroelectric	41
2	Cogeneration – Equity Interest Only	2
	Cogeneration – Own/Operate	3
3	Alternative Fuels – Equity Interest Only	3
	Alternative Fuels – Own/Operate	5
4	Infrastructure (Water & Sewer)	17
	<b>Total Number of Facilities</b>	<b>71</b>

1 **Q. Please describe the position of LPSCO within APIF's organizational structure.**

2 A. According to the organizational chart provided in response to a Staff data request,  
3 Algonquin Power Income Fund owns Algonquin Holdco, who in turn, owns Algonquin  
4 Power Fund Canada, who in turn, owns Algonquin Power Income Fund, who in turn,  
5 owns Algonquin Power Fund America, who in turn, owns Algonquin Water Resources of  
6 America, who in turn, owns LPSCO.

7  
8 **Q. What is the primary goal of cost allocation between an unregulated affiliate and a  
9 regulated affiliate?**

10 A. The primary goal is the fair distribution of costs between the unregulated and regulated  
11 affiliate through proper allocations.

12  
13 **Q. What is the effect of improperly allocated costs on rate payers?**

14 A. When costs incurred primarily for the benefit of an unregulated affiliate's business are  
15 improperly identified and allocated as overhead/common costs, then costs of the  
16 unregulated affiliate are shifted to the captive customers of the regulated utility. This cost  
17 shifting results in the captive customers of the regulated utility subsidizing the business  
18 operations of the unregulated affiliate and this harms customers by creating artificially  
19 higher rates. The costs of a regulated utility, such as LPSCO, should only include those  
20 costs that would have been incurred on a "stand-alone basis."

21  
22 **Q. What is the definition of "stand-alone basis"?**

23 A. "Stand-alone basis" means reflecting costs as if the regulated utility had produced the  
24 service by itself. This helps to ensure that any subsidization of the unregulated business  
25 by the captive utility customers is eliminated.

26

1 **Q. What is the amount of expense that was allocated from the APIF unregulated**  
2 **business operations to LPSCO during the test year?**

3 A. LPSCO was allocated \$518,441 during the test year, of which \$250,979 was allocated to  
4 the water division and \$267,462 was allocated to the wastewater division.

5  
6 **Q. How was the allocation to LSPCO made?**

7 A. First, \$3.95 million in expenses from the unregulated affiliate were allocated to the  
8 infrastructure division based on a single allocation factor of 26.98 percent.<sup>2</sup> Those costs  
9 were then allocated to each company within the infrastructure division based upon  
10 customer count.

11  
12 **Q. Did Staff review the amounts comprising the \$3.95 million of expenses allocated from**  
13 **the unregulated affiliate to LPSCO?**

14 A. Yes.

15  
16 **Q. Does Staff agree that all of the \$3.95 million in costs are costs that should be**  
17 **allocated?**

18 A. No, Staff does not. Staff reviewed the underlying invoices for the costs and determined  
19 that the Company did not identify the costs as direct costs (i.e., costs that can be identified  
20 with a particular service) or indirect costs (costs that cannot be identified with a particular  
21 service) consistent with the NARUC Guidelines for Cost Allocation and Affiliate  
22 Transactions. These guidelines require that the costs primarily attributable to a business  
23 operation should be, to the extent appropriate, directly assigned to that business operation.

24

---

<sup>2</sup> This factor is based on the number of infrastructure facilities to total facilities.

1 **Q. What portion of the \$3.95 million did Staff determine was attributable to (i.e., direct**  
2 **costs of) APIF or an affiliate?**

3 A. Based upon review of the actual supporting invoices provided by the Company, Staff  
4 determined that almost all of the costs were obviously attributable to the operations of the  
5 APIF or one of its affiliates, therefore, Staff assigned 90 percent of the costs to APIF. The  
6 remaining ten percent recognizes that the other affiliates receive a benefit from the  
7 common costs, and therefore, should be allocated a percentage greater than zero.

8  
9 **Q. Does Staff agree that all of the \$3.95 million of expenses allocated from the**  
10 **unregulated affiliate are allowable costs?**

11 A. No, Staff does not. As shown on schedule JMM-WW14, Page 2, Staff identified \$191,828  
12 in unallowable costs. For example, Staff identified \$68,350 for charitable contributions,  
13 \$5,066 for season tickets for hockey games, \$3,500 for Superbowl tickets, \$16,864 for  
14 gold watches and clocks; and \$33,000 for IRS taxes and penalties related to the affiliate's  
15 unregulated business operations.

16  
17 **Q. Does Staff agree with the Company's calculation of the factor to allocate common**  
18 **costs?**

19 A. No, Staff does not.

20  
21 **Q. What allocation formula did the Company use to allocate common costs?**

22 A. The Company used the following formula: 17 utilities / 63 total facilities = 26.98%.

23

1 **Q. Does Staff agree with the number of total facilities that the Company used in its**  
2 **formula?**

3 A. No, Staff does not. Staff attempted to match the number used in the formula to the  
4 information in the 2007 Algonquin Power Income Fund Annual Reports; however, the  
5 numbers did not agree. The information in the 2007 annual reports is as follows:

6

Line No	Type of Facility	Year-End 2007
1	Hydroelectric	41
2	Cogeneration – Equity Interest Only	2
3	Cogeneration – Own/Operate	3
4	Alternative Fuels – Equity Interest Only	3
5	Alternative Fuels – Own/Operate	5
6	Infrastructure (Water & Sewer)	17
7	<b>Total Number of Facilities</b>	<b>71</b>
8	<b>Allocation Percentage (1 / L7)</b>	<b>1.41%</b>

7

8 **Q. What data does Staff recommend the Company use for its common cost allocation**  
9 **formula?**

10 A. Staff recommends that the year-end information per the Algonquin Power annual report be  
11 used to determine the number of total facilities.

12

13 **Q. Did Staff prepare a schedule of its recommended common costs and allocation**  
14 **factor?**

15 A. Yes, Staff's calculations are shown on Schedule JMM-WW14.

16

17 **Q. What is Staff's recommendation?**

18 A. Staff recommends decreasing other contracted services expense by \$266,665, from  
19 \$2,719,118 to \$2,452,453, as shown on Schedules JMM-WW12 and JMM-WW14.

20

1 *Operating Income Adjustment No. 3 – Wastewater Division, Rate Case Expense*

2 **Q. Did Staff make an adjustment to rate case expense?**

3 A. Yes.

4  
5 **Q. Why did Staff make this adjustment?**

6 A. Staff typically normalizes rate case expense over a three to five year period. The  
7 Company has not been in for a rate case in close to nine years, so Staff recommends  
8 normalizing the rate case expense over five years.

9  
10 **Q. What is Staff's recommendation?**

11 A. Staff recommends decreasing rate case expense by \$28,000, from \$70,000 to \$42,000, as  
12 shown on Schedules JMM-WW12 and JMM-WW15.

13  
14 *Operating Income Adjustment No. 4 – Wastewater Division, Meals and Entertainment Expense*

15 **Q. Did Staff make an adjustment Meals and Entertainment expense?**

16 A. Yes.

17  
18 **Q. What adjustment did Staff make?**

19 A. Staff's adjustment decreased Meals and Entertainment Expense by \$494.

20  
21 **Q. Why did Staff make this adjustment?**

22 A. Meals and Entertainment are not necessary to the provision of water services.

23  
24 **Q. What is Staff's recommendation?**

25 A. Staff recommends decreasing miscellaneous expense by \$494, from \$36,656 to \$36,162,  
26 as shown on Schedules JMM-WW12 and JMM-WW16.

1 *Operating Income Adjustment No. 5 – Wastewater Division, Bad Debt Expense*

2 **Q. Did Staff make an adjustment to bad debt expense?**

3 A. Yes.

4  
5 **Q. Why did Staff make this adjustment?**

6 A. Bad Debt expenses for the wastewater division were abnormally high in the test year and  
7 “between” years. As a result Staff normalized this amount over a three-year period for the  
8 wastewater divisions.

9  
10 **Q. What is Staff’s recommendation?**

11 A. Staff recommends decreasing bad debt expense by \$21,791, from \$43,889 to \$22,098 to  
12 better reflect the Company’s ongoing level of bad debt expense. Please see Schedules  
13 JMM-WW12 and JMM-WW17.

14  
15 *Operating Income Adjustment No.6 – Wastewater Division, Depreciation Expense*

16 **Q. Did Staff make an adjustment to depreciation expense?**

17 A. Yes.

18  
19 **Q. What adjustment did Staff make?**

20 A. As a result of adjustments made to plant in service, Staff also adjusted the associated  
21 depreciation expense.

22  
23 **Q. What is Staff’s recommendation?**

24 A. Staff’s adjustment decreases depreciation expense by \$264,954, from \$1,550,237 to  
25 \$1,285,283. Please see Schedules JMM-WW12 and JMM-WW18 for Staff’s calculation.

26

1 *Operating Income Adjustment No. 7 – Wastewater Division, Property Tax*

2 **Q. Did Staff make an adjustment to property tax?**

3 A. Yes.

4  
5 **Q. What adjustment does Staff recommend for test year property tax expense?**

6 A. Staff's adjustment decreased property tax expense by \$225,740, from \$336,629 to  
7 \$110,889, for test year expenses based upon Staff's adjusted test year revenues. Please  
8 see Schedule JMM-WW12 and Column A on Schedule JMM-WW19.

9  
10 **Q. What does Staff recommend for property tax expense on a going-forward basis?**

11 A. Staff recommends increasing property tax expense by \$16,493, from \$110,889 to  
12 \$127,382, based upon Staff's recommended revenues. Please see Schedule JMM-WW11  
13 and Column B on Schedule JMM-WW19.

14  
15 *Operating Income Adjustment No .8 – Wastewater Division, Income Tax*

16 **Q. Did Staff make an adjustment to Income Tax?**

17 A. Yes.

18  
19 **Q. Why did Staff make this adjustment?**

20 A. Staff's adjustment reflects Staff's calculation of the income tax expense based upon  
21 Staff's adjusted test year taxable income, as shown on Schedule JMM-WW20.

22  
23 **Q. What is Staff's recommendation?**

24 A. Staff recommends increasing test year Income Tax Expense by \$321,964, from negative  
25 \$99,906 to \$222,058, as shown on Schedules JMM-WW11 and JMM-WW20.

26

1 **OTHER MATTERS**

2 *Low Income Tariff*

3 **Q. Is the Company proposing a low income tariff?**

4 A. Yes, this low income tariff is similar to the one devised for Chaparral City Water  
5 Company ("Chaparral"), Docket No. W-02113A-07-0551.

6  
7 **Q. Please describe the proposal?**

8 A. The Company is proposing that customers meeting the necessary qualifications would  
9 receive a 15 percent discount off their water bill.

10  
11 **Q. Did the Company provide an example of how the low income tariff would work?**

12 A. No. However, since the Company claims it is similar to the low income tariff approved in  
13 the Chaparral case, Staff assumes it works the same way. In that case, Chaparral stated,  
14 "Based on the existing bill for a median usage on a 3/4-inch meter currently at \$24.94, the  
15 low income program would result in a reduction of \$3.74," or 15 percent.

16  
17 **Q. What would be the primary factor in determining ratepayer eligibility for this  
18 program?**

19 A. The primary factor would be the combined gross income of all persons living in the  
20 household.

21  
22 **Q. How are the Company's gross annual house hold income limits determined?**

23 A. The Company's proposed income guidelines are based on 150 percent of the 2008 federal  
24 poverty guidelines.

25

1 **Q. Would these income guidelines be updated every year?**

2 A. Yes.

3

4 **Q. What are the draw backs to a low income tariff?**

5 A. All non-participants will subsidize the low income households in the Company's service  
6 area.

7

8 **Q. How will this be accomplished?**

9 A. Through a separate surcharge on the non-participant's bills identified as a "Low Income  
10 Assistance Charge."

11

12 **Q. Are there any other fees that would be included in this surcharge?**

13 A. Yes, the Company proposes to include a 10 percent fee for administration and carrying  
14 costs.

15

16 **Q. What is Staff's recommendation?**

17 A. Staff recommends approval of the low income tariff.

18

19 **Q. Does this conclude your Direct Testimony?**

20 A. Yes, it does.

REVENUE REQUIREMENT

<u>LINE NO.</u>	<u>DESCRIPTION</u>	(A) COMPANY FAIR VALUE	(B) STAFF FAIR VALUE
1	Adjusted Rate Base	\$ 28,296,903	\$ 27,472,314
2	Adjusted Operating Income (Loss)	\$ 163,778	\$ 655,433
3	Current Rate of Return (L2 / L1)	0.58%	2.39%
4	Required Rate of Return	11.41%	8.70%
5	Required Operating Income (L4 * L1)	\$ 3,228,677	\$ 2,390,091
6	Operating Income Deficiency (L5 - L2)	\$ 3,064,899	\$ 1,734,658
7	Gross Revenue Conversion Factor	1.6286	1.6381
8	Required Revenue Increase (L7 * L6)	\$ 4,991,601	<b>\$ 2,841,618</b>
9	Adjusted Test Year Revenue	\$ 6,356,374	\$ 6,356,374
10	Proposed Annual Revenue (L8 + L9)	\$ 11,347,975	\$ 9,197,992
11	Required Increase in Revenue (%)	78.53%	44.71%

References:

Column (A): Company Schedule A-1

Column (B): Staff Schedules JMM-W3 and JMM-W11

**GROSS REVENUE CONVERSION FACTOR**

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<u>Calculation of Gross Revenue Conversion Factor:</u>					
1	Revenue	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	38.9553%			
5	Subtotal (L3 - L4)	61.0447%			
6	<b>Revenue Conversion Factor (L1 / L5)</b>	<b>1.638143</b>			
<u>Calculation of Uncollectible Factor:</u>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 23)	38.5989%			
9	One Minus Combined Income Tax Rate (L7 - L8)	61.4011%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10)	0.0000%			
<u>Calculation of Effective Tax Rate:</u>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.9680%			
14	Federal Taxable Income (L12 - L13)	93.0320%			
15	Applicable Federal Income Tax Rate (Line 55)	34.0000%			
16	Effective Federal Income Tax Rate (L14 x L15)	31.6309%			
17	Combined Federal and State Income Tax Rate (L13 +L16)		38.5989%		
<u>Calculation of Effective Property Tax Factor</u>					
18	Unity	100.0000%			
19	Combined Federal and State Income Tax Rate (L17)	38.5989%			
20	One Minus Combined Income Tax Rate (L18-L19)	61.4011%			
21	Property Tax Factor (JMM-WW18, L27)	0.5804%			
22	Effective Property Tax Factor (L20*L21)		0.3564%		
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			38.9553%	
24	Required Operating Income (Schedule JMM-WW1, Line 5)	\$ 2,390,091			
25	Adjusted Test Year Operating Income (Loss) (Schedule JMM-WW11, Line 34)	655,433			
26	Required Increase in Operating Income (L24 - L25)		\$ 1,734,658		
27	Income Taxes on Recommended Revenue (Col. [E], L52)	\$ 1,312,524			
28	Income Taxes on Test Year Revenue (Col. [B], L52)	222,058			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		1,090,466		
30	Recommended Revenue Requirement (Schedule JMM-WW1, Line 10)	\$ 9,197,992			
31	Uncollectible Rate (Line 10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L30*L31)	\$ -			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32-L33)				
35	Property Tax with Recommended Revenue (JMM-WW18, Col B, L18)	\$ 127,382			
36	Property Tax on Test Year Revenue (JMM-WW18, Col A, L17)	110,889			
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		16,493		
38	Total Required Increase in Revenue (L26 + L29 + L34 + L37)		<b>\$ 2,841,618</b>		
<u>Calculation of Income Tax:</u>					
39	Revenue (Schedule JMM-11, Col. [C], Line 5 & Sch. JMM-1, Col. [D] Line 10)	\$ 6,356,374	\$ 2,841,618	\$ 9,197,992	
40	Operating Expenses Excluding Income Taxes	\$ 5,478,883		\$ 5,495,377	
41	Synchronized Interest (L56)	\$ 302,195		\$ 302,195	
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 575,295		\$ 3,400,420	
43	Arizona State Income Tax Rate	6.9680%		6.9680%	
44	Arizona Income Tax (L42 x L43)	\$ 40,087		\$ 236,941	
45	Federal Taxable Income (L42 - L44)	\$ 535,209		\$ 3,163,479	
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 7,500		\$ 7,500	
47	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ 6,250		\$ 6,250	
48	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ 8,500		\$ 8,500	
49	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ 91,650		\$ 91,650	
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ 68,071		\$ 961,683	
51	Total Federal Income Tax	\$ 181,971		\$ 1,075,583	
52	Combined Federal and State Income Tax (L44 + L51)	\$ 222,058		\$ 1,312,524	
53	Applicable Federal Income Tax Rate [Col. [E], L51 - Col. [B], L51] / [Col. [E], L45 - Col. [B], L45]			34.0000%	
<u>Calculation of Interest Synchronization:</u>					
54	Rate Base (Schedule JMM-3)	\$ 27,472,314			
55	Weighted Average Cost of Debt (Schedule JMM-WW19)	1.1000%			
56	Synchronized Interest (L45 X L46)	\$ 302,195			

Litchfield Park Service Company - Wastewater Division  
Docket No. WS-01428A-09-0103  
Test Year Ended September 30, 2008

Schedule JMM-WW3

RATE BASE - ORIGINAL COST

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	Adj. No.	(C) STAFF AS ADJUSTED
1	Plant in Service	\$ 60,394,260	1,2	\$ 59,800,658
2	Less: Accumulated Depreciation	8,475,991	3	8,282,147
3	Net Plant in Service	<u>\$ 51,918,269</u>		<u>\$ 51,518,511</u>
<i>LESS:</i>				
4	Contributions in Aid of Construction (CIAC)	\$ 18,737,132	1	\$ 18,642,786
5	Less: Accumulated Amortization	2,072,117		\$ 2,072,117
6	Net CIAC	<u>16,665,015</u>		<u>\$ 16,570,669</u>
7	Advances in Aid of Construction (AIAC)	7,006,208	1	6,989,559
8	Customer Deposits	68,685	4	150,483
9	Deferred Income Tax Credits	15,987	5	335,487
<i>ADD:</i>				
9	Unamortized Debt Issuance Costs	134,528		-
10	Cash Working Capital	-		-
11	<b>Original Cost Rate Base</b>	<u>\$ 28,296,903</u>		<u>\$ 27,472,314</u>

References:

Column [A]: Company as Filed

Column [B]: Schedule JMM-WW4

Column (C): Column (A) + Column (B)

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) ADJ #1 Plant Not Used and Useful	(C) ADJ #2 Transfer of Plant	(D) ADJ #3 Accumulated Depreciation	(E) ADJ #4 Customer Deposits	(F) ADJ #5 Deferred Taxes	(G) ADJ #6 Unamortized Debt Issuance Costs	(G) STAFF ADJUSTED
PLANT IN SERVICE:			Ref. Sch JMM-WW5	Ref. Sch JMM-WW6	Ref. Sch JMM-WW7	Ref. Sch JMM-WW8	Ref. Sch JMM-WW9	Ref. Sch JMM-WW10		
			\$	\$	\$	\$	\$	\$	\$	\$
1	351	Organization	-	-	-	-	-	-	-	-
2	352	Franchises	-	-	-	-	-	-	-	-
3	353	Land and Land Rights	1,783,426	-	-	-	-	-	-	1,783,426
4	354	Structures and Improvements	19,319,421	(388,834)	-	-	-	-	-	18,930,587
5	355	Power Generation Equipment	543,670	-	-	-	-	-	-	543,670
6	360	Collection Services - Force	1,161,105	-	-	-	-	-	-	1,161,105
7	361	Collection Services - Gravity	23,113,391	(18,730)	-	-	-	-	-	23,094,661
8	362	Special Collecting Structures	-	-	-	-	-	-	-	-
9	363	Services to Customers	-	-	-	-	-	-	-	-
10	364	Flow Measuring Devices	47,019	-	-	-	-	-	-	47,019
11	365	Flow Measuring Installations	-	-	-	-	-	-	-	-
12	366	Reuse Services	3,789,468	-	-	-	-	-	-	3,789,468
13	367	Reuse Meters and Installations	52,331	-	-	-	-	-	-	52,331
14	370	Receiving Wells	860,393	-	-	-	-	-	-	860,393
15	371	Effluent Pumping Equipment	1,858,411	(103,992)	-	-	-	-	-	1,754,419
16	374	Reuse Trans. And Dist. System	62,825	-	-	-	-	-	-	62,825
17	375	Reuse T&D	414,315	-	-	-	-	-	-	414,315
18	380	Treatment and Disposal Equipment	5,469,478	-	(38,625)	-	-	-	-	5,430,853
19	381	Plant Sewers	47,788	-	-	-	-	-	-	47,788
20	382	Outfall Sewer Lines	343,681	-	-	-	-	-	-	343,681
21	389	Other Plant & Misc. Equipment	644,609	(43,421)	-	-	-	-	-	601,188
22	390	Office Furniture & Equipment	198,772	-	-	-	-	-	-	198,772
23	391	Transportation Equipment	26,078	-	-	-	-	-	-	26,078
24	392	Stores Equipment	8,968	-	-	-	-	-	-	8,968
25	393	Tools, Shop & Garage Equipment	56,167	-	-	-	-	-	-	56,167
26	394	Laboratory Equipment	173,948	-	-	-	-	-	-	173,948
27	395	Power Operated Equipment	-	-	-	-	-	-	-	-
28	396	Communication Equipment	418,996	-	-	-	-	-	-	418,996
29	398	Other Tangible Plant	-	-	-	-	-	-	-	-
30			-	-	-	-	-	-	-	-
31			-	-	-	-	-	-	-	-
32		Total Plant in Service	\$ 60,394,260	\$ (554,977)	\$ (38,625)	\$ (182,696)	\$ -	\$ -	\$ -	\$ 59,800,658
33		Less: Accumulated Depreciation	8,475,991	-	(11,148)	(182,696)	-	-	-	8,282,147
34										
35		Net Plant in Service (L59 - L 60)	\$ 51,918,269	\$ (554,977)	\$ (27,477)	\$ 182,696	\$ -	\$ -	\$ -	\$ 51,518,511
36										
37		LESS:								
38		Contributions in Aid of Construction (CIAC)	\$ 18,737,132	\$ (94,346)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,642,786
39		Less: Accumulated Amortization	2,072,117	(84,346)	-	-	-	-	-	2,072,117
40		Net CIAC (L25 - L26)	16,665,015	(16,649)	-	-	-	-	-	16,578,669
41		Advances in Aid of Construction (AIAC)	7,006,208	-	-	-	-	-	-	6,989,559
42		Customer Deposits	66,685	-	-	-	81,798	-	-	150,483
43		Deferred Income Taxes	15,987	-	-	-	-	319,500	-	335,487
44			-	-	-	-	-	-	-	-
45			-	-	-	-	-	-	-	-
46			-	-	-	-	-	-	-	-
47		ADD:								
48		Unamortized Debt Issuance Costs	134,528	-	-	-	-	(134,528)	-	-
49		Cash Working Capital	-	-	-	-	-	-	-	-
50			-	-	-	-	-	-	-	-
51		Original Cost Rate Base	\$ 26,296,903	\$ (443,982)	\$ (27,477)	\$ 182,696	\$ (81,798)	\$ (319,500)	\$ (134,528)	\$ 27,472,314

RATE BASE ADJUSTMENT NO. 1 - PLANT NOT USED AND USEFUL

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	354	Structures & Improvements	\$ 19,319,421	\$ (388,834)	\$ 18,930,587
2	361	Collection Sewer - Gravity	23,113,391	(18,730)	23,094,661
3	371	Pumping Equipment	1,858,411	(103,992)	1,754,419
4	389	Other Plant & Miscellaneous Equipment	644,609	(43,421)	601,188
5			<u>\$ 44,935,832</u>	<u>\$ (554,977)</u>	<u>\$ 44,380,855</u>

6  
7 Based on Staff Engineering Report Table G-1.  
8

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AIAC & CIAC AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
10				
11				
12				
13	Advances in Aid of Construction (AIAC)	\$ 7,006,208	\$ (16,649)	\$ 6,989,559
14				
15	Contributions in Aid of Construction (CIAC)	\$ 18,737,132	\$ (94,346)	\$ 18,642,786

REFERENCES:

- Column [A]: Company Filing
- Column [B]: Direct Testimony JMM
- Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 2 - TRANSFER OF PLANT

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1		Plant in Service	\$ 59,839,283	\$ (38,625)	\$ 59,800,658
2					
3					
			[A]	[B]	[C]
4			COMPANY	STAFF	STAFF
5			AIAC & CIAC	ADJUSTMENTS	AS ADJUSTED
6		DESCRIPTION	AS FILED		
7		Accumulated Depreciation	\$ 8,475,991	\$ (11,148)	\$ 8,464,843
8					
9					

REFERENCES:

- Column [A]: Company Filing
- Column [B]: Direct Testimony JMM
- Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 3 - ACCUMULATED DEPRECIATION

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Accumulated Depreciation	\$ 8,464,843	\$ (182,696)	\$ 8,282,147

References:

Column A: Company Schedule B-2, Page 1

Column B: Column [C] - Column [A]

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 4 - CUSTOMER DEPOSITS

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1		Customer Deposits	\$ 68,685	\$ 81,798	\$ 150,483
2					
3		<u>Staff Calculation:</u>			
4		8600-2-0000-20-2113-0000 Customer Deposits	73,568		
5		8600-2-0000-20-2112-0002 Customer Security Deposits	8,230		
			<u>\$ 81,798</u>		

REFERENCES:

Column [A]: Company Filing  
 Column [B]: Direct Testimony JMM  
 Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 5 - DEFERRED INCOME TAXES

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1		Deferred Income Taxes	\$ 15,987	\$ 319,500	\$ 335,487

To reverse the Company's pro-forma adjustment.

REFERENCES:

- Column [A]: Company Filing
- Column [B]: Direct Testimony JMM
- Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 6 - UNAMORTIZED DEBT ISSUANCE COSTS

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1		Unamortized Debt Issuance Costs	\$ 134,528	\$ (134,528)	\$ -

To Remove Unamortized Debt Issuance Costs.

REFERENCES:

- Column [A]: Company Filing
- Column [B]: Direct Testimony JMM
- Column [C]: Column [A] + Column [B]

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COMPANY ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	Adj. No.	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
1	<b>REVENUES:</b>						
2	Flat Rate Revenues	\$ 6,164,589	\$ -		\$ 6,164,589	\$ 2,841,618	\$ 9,006,207
3	Measured Revenues	92,030	-		92,030	-	92,030
4	Other Wastewater Revenues	99,755	-		99,755	-	99,755
5	Intentionally Left Blank	-	-		-	-	-
6	<b>Total Operating Revenues</b>	<b>\$ 6,356,374</b>	<b>\$ -</b>		<b>\$ 6,356,374</b>	<b>\$ 2,841,618</b>	<b>\$ 9,197,992</b>
7							
8	<b>OPERATING EXPENSES:</b>						
9	Salaries and Wages	\$ -	\$ -		\$ -	\$ -	\$ -
10	Purchased Wastewater Treatment	1,205	-		1,205	-	1,205
11	Sludge Removal Expense	267,554	-		267,554	-	267,554
12	Purchased Power	632,064	-		632,064	-	632,064
13	Fuel for Power Production	2,076	-		2,076	-	2,076
14	Chemicals	279,749	-		279,749	-	279,749
15	Materials & Supplies	75,579	(5,975)	1	69,604	-	69,604
16	Contractual Services, Legal&Engr	24,084	-		24,084	-	24,084
17	Contractual Services - Other	2,719,118	(266,665)	2	2,452,453	-	2,452,453
18	Contractual Services - Testing	33,348	-		33,348	-	33,348
19	Equipment Rental	78,309	-		78,309	-	78,309
20	Rents - Building	18,976	-		18,976	-	18,976
21	Transportation	69,551	-		69,551	-	69,551
22	General Liability Insurance	32,133	-		32,133	-	32,133
23	Insurance - Other	2,213	-		2,213	-	2,213
24	Reg Commission Expense	19,133	-	3	19,133	-	19,133
25	Reg Commission Expense - Rate Case	70,000	(28,000)	4	42,000	-	42,000
26	Miscellaneous Expense	36,656	(494)	5	36,162	-	36,162
27	Bad Debt Expense	43,889	(21,791)		22,098	-	22,098
28	Intentionally Left Blank	-	-		-	-	-
29	Depreciation	1,550,237	(264,954)	6	1,285,283	-	1,285,283
30	Taxes other than Income	-	-		-	-	-
31	Property Taxes	336,629	(225,740)	7	110,889	16,493	127,382
32	Income Taxes	(99,906)	321,964	8	222,058	1,090,466	1,312,524
33	Intentionally Left Blank	-	-		-	-	-
34	<b>Total Operating Expenses</b>	<b>\$ 6,192,596</b>	<b>\$ (491,656)</b>		<b>\$ 5,700,941</b>	<b>\$ 1,106,960</b>	<b>\$ 6,807,901</b>
35	<b>Operating Income (Loss)</b>	<b>\$ 163,778</b>	<b>\$ 491,656</b>		<b>\$ 655,433</b>	<b>\$ 1,734,658</b>	<b>\$ 2,390,091</b>

References:

- Column (A): Company Schedule C-1
- Column (B): Schedule MEM-13
- Column (C): Column (A) + Column (B)
- Column (D): Schedules MEM-1 and MEM-2
- Column (E): Column (C) + Column (D)

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) Materials and Supplies Expense ADJ #1	(C) Corporate Expense Allocation ADJ #2	(D) Rate Case Expense ADJ #3	(E) Meals and Ent. Expense ADJ #4	(F) Bad Debt Expense ADJ #5	(G) Depreciation Expense ADJ #6	(H) Property Tax Expense ADJ #7	(I) Income Tax Expense ADJ #8	(J) STAFF
		Ref. Sch. JMM-WW13	Ref. Sch. JMM-WW14	Ref. Sch. JMM-WW15	Ref. Sch. JMM-WW16	Ref. Sch. JMM-WW17	Ref. Sch. JMM-WW18	Ref. Sch. JMM-WW19	Ref. Sch. JMM-WW20	Ref. Sch. JMM-WW20	ADJUSTED
1	REVENUES:										
2	Flat Rate Revenues	\$ 6,164,589									\$ 6,164,589
3	Measured Revenues	92,030									92,030
4	Other Wastewater Revenues	99,755									99,755
5	Intentionally Left Blank										
6	<b>Total Operating Revenues</b>	<b>\$ 6,356,374</b>									<b>\$ 6,356,374</b>
7											
8	OPERATING EXPENSES:										
9	Salaries and Wages										1,205
10	Purchased Wastewater Trmnt	1,205									267,554
11	Sludge Removal Expense	267,554									632,064
12	Purchased Power	632,064									2,076
13	Fuel for Power Production	2,076									279,749
14	Chemicals	279,749									69,604
15	Materials & Supplies	75,579	(5,975)								24,084
16	Contractual Services, Legal&Engr	24,084									33,348
17	Contractual Services - Other	2,719,118		(266,665)							78,309
18	Contractual Services - Testing	33,348									18,976
19	Equipment Rental	78,309									69,551
20	Rents - Building	18,976									32,133
21	Transportation	69,551									2,213
22	General Liability Insurance	32,133									19,133
23	Insurance - Other	2,213									70,000
24	Reg Commission Expense	19,133									36,656
25	Reg Commission Expense - Rate Case	70,000			(28,000)						43,889
26	Miscellaneous Expense	36,656									1,550,237
27	Bad Debt Expense	43,889			(494)						336,629
28	Intentionally Left Blank										(99,906)
29	Depreciation	1,550,237									
30	Taxes other than Income										
31	Property Taxes	336,629									
32	Income Taxes	(99,906)									
33	Intentionally Left Blank										
34	<b>Total Operating Expenses</b>	<b>\$ 6,192,596</b>	<b>(5,975)</b>	<b>(266,665)</b>	<b>(28,000)</b>	<b>(494)</b>	<b>(21,791)</b>	<b>(264,954)</b>	<b>(225,740)</b>	<b>321,964</b>	<b>\$ 5,700,941</b>
35	<b>Operating Income (Loss)</b>	<b>\$ 163,778</b>	<b>\$ 5,975</b>	<b>\$ 266,665</b>	<b>\$ 28,000</b>	<b>\$ 494</b>	<b>\$ 21,791</b>	<b>\$ 264,954</b>	<b>\$ 225,740</b>	<b>\$ (321,964)</b>	<b>\$ 655,433</b>

OPERATING INCOME ADJUSTMENT NO. 1 - MATERIALS AND SUPPLIES

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	Materials and Supplies	\$ 75,579	\$ (5,975)	\$ 69,604

References:

Column (A), Company Schedule C-1

Column (B): Testimony JMM

Column (C): Column (A) + Column (B)

OPERATING INCOME ADJUSTMENT NO. 2 - EXPENSE ALLOCATIONS  
FROM UNREGULATED AFFILIATE

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENTS (Col C - Col A)	[C] STAFF AS ADJUSTED
1	Contractual Services - Other	\$ 2,451,656	\$ -	\$ 2,451,656
2	Corporate Expense Allocation	267,462	(266,665)	797
3	Total Contractual Services - Other	\$ 2,719,118	\$ (266,665)	\$ 2,452,453

[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
COSTS TO BE ALLOCATED TO LPSCO							
Description	Amount	Unallowable Costs (Sch JMM-6, P2)	Direct Costs of Unregulated Affiliate(s)	Allowable Common Costs Allocated to All 71 Companies	Allocation <sup>5</sup> %	Costs to be Allocated to LPSCO (Col I x Col J)	
13	Rent	\$ 430,739	\$ -	\$ (430,739)	\$ -	1.41%	\$ -
14	Audit <sup>1</sup>	\$ 507,000	\$ -	\$ (456,300)	\$ 50,700	1.41%	\$ 714.08
15	Tax Services <sup>2</sup>	\$ 265,000	\$ -	\$ (238,500)	\$ 26,500	1.41%	\$ 373.24
16	Legal-General <sup>3</sup>	\$ 300,000	\$ -	\$ (284,400)	\$ 15,600	1.41%	\$ 219.72
17	Other Professional Services	\$ 455,000	\$ -	\$ (455,000)	\$ -	1.41%	\$ -
18	Management Fee	\$ 636,619	\$ -	\$ (636,619)	\$ -	1.41%	\$ -
19	Unit Holder Communications	\$ 314,100	\$ -	\$ (314,100)	\$ -	1.41%	\$ -
20	Trustee Fees	\$ 204,000	\$ -	\$ (204,000)	\$ -	1.41%	\$ -
21	Office Costs	\$ 254,100	\$ (46,186)	\$ (207,914)	\$ -	1.41%	\$ -
22	Licenses/Fees and Permits	\$ 305,000	\$ (145,642)	\$ (159,358)	\$ -	1.41%	\$ -
23	Escrow and Transfer Fees	\$ 75,000	\$ -	\$ (75,000)	\$ -	1.41%	\$ -
24	Depreciation Expense <sup>4</sup>	\$ 204,242	\$ -	\$ (183,818)	\$ 20,424	1.41%	\$ 287.66
25		\$ 3,950,800	\$ (191,828)	\$ (3,645,748)	\$ 113,224		\$ 1,594.71
27						Water	\$ 797.35
28						Waste Water	\$ 797.35
29							\$ 1,594.71

31 Foot Note 1: Audit - As the parent company's lenders require the APIF to have annual financial audits, Staff assigned the majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 71 companies/interests.

34 Foot Note 2: Tax Services - Given the tax complexity of the APIF's many holdings and transactions, Staff assigned the majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 71 companies/interests.

37 Foot Note 3: Legal, General - Staff reviewed the legal invoices and found that the very large majority of the legal invoices pertained to the APIF.

41 Foot Note 4: Depreciation Expense - Given that most of APIF's plant costs benefit primarily APIF, Staff assigned the majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 71 companies/interests.

44 Foot Note 5: Allocation Percentage - Calculated as follows: 1 / 71 companies = 1.41%.

References:  
Column A: Company Schedule  
Column B: Testimony  
Column C: Column [A] + Column [B]

LINE NO.	Category	Description of Unallowable Cost	Amount
1	Office Fees and Expenses	Wind Analysis & Planning Software	\$15,056
2	Office Fees and Expenses	Gold Watches and Clocks	\$16,864
3	Office Fees and Expenses	Pilsner Beer Glasses	\$5,700
4	Office Fees and Expenses	Leafs-Raptors Season Tickets	\$5,066
5	Office Fees and Expenses	Super Bowl XLII Tickets	\$3,500
6		<b>Subtotal for Office Expenses</b>	<b>\$46,186</b>
7			
8			
9	Licenses and Fees	Donation - Wind Project Develop	\$25,000
10	Licenses and Fees	Donation - Water Project in Africa	\$25,000
11	Licenses and Fees	Donation - Cancer Society	\$13,350
12	Licenses and Fees	Donation - Multiple Myeloma	\$5,000
13	Licenses and Fees	Wind Development	\$7,887
14	Licenses and Fees	U.S. Trustee	\$9,375
15	Licenses and Fees	St. Leon Wind Energy	\$12,556
16	Licenses and Fees	Algonquin Power Fund Inc Taxes	\$6,891
17	Licenses and Fees	Algonquin Power Fund Inc Taxes	\$6,794
18	Licenses and Fees	Tax Ruling Request for KMS America & Subs	\$10,000
19	Licenses and Fees	Algonquin Power Fund Inc Taxes	\$23,789
20		<b>Subtotal for Licenses &amp; Fees</b>	<b>\$145,642</b>

OPERATING INCOME ADJUSTMENT NO. 3 - RATE CASE EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	Rate Case Expense	\$ 70,000	\$ (28,000)	\$ 42,000

Staff Calculation:

Estimated Rate Case Cost	\$	210,000
Normalized Over Five Years		5
		<u>42,000</u>

References:

- Column (A), Company Schedule C-1
- Column (B): Testimony JMM
- Column (C): Column (A) + Column (B)

Litchfield Park Service Company - Wastewater Division  
Docket No. WS-01428A-09-0103  
Test Year Ended September 30, 2008

Schedule JMM-WW16

OPERATING INCOME ADJUSTMENT NO. 4 - MEALS AND ENTERTAINMENT

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	775.00	Miscellaneous Expense	\$ 36,656	\$ (494)	\$ 36,162

References:

Column (A), Company Schedule C-1

Column (B): Testimony JMM

Column (C): Column (A) + Column (B)

Litchfield Park Service Company - Wastewater Division  
 Docket No. WS-01428A-09-0103  
 Test Year Ended September 30, 2008

Schedule JMM-WW17

OPERATING INCOME ADJUSTMENT NO. 5 - BAD DEBT

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1		Bad Debt Expense	\$ 43,889	\$ (21,791)	\$ 22,098

Staff Calculation:

Test Year	\$43,889
2007	19,632
2006	2,773
	<u>\$66,294</u>
Normalized over 3 years	3
	<u>\$ 22,098</u>

References:

Column (A), Company Schedule C-1  
 Column (B): Testimony JMM  
 Column (C): Column (A) + Column (B)

OPERATING INCOME ADJUSTMENT NO. 6 - DEPRECIATION EXPENSE ON TEST YEAR PLANT

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]	[D]	[E]
			PLANT in SERVICE Per Staff	NonDepreciable or Fully Depreciated PLANT	DEPRECIABLE PLANT (Col A - Col B)	DEPRECIATION RATE	DEPRECIATION EXPENSE (Col C x Col D)
1	351	Organization	\$ -	\$ -	\$ -	0.00%	\$ -
2	352	Franchises	\$ -	\$ -	\$ -	0.00%	\$ -
3	353	Land and Land Rights	\$ 1,783,426	\$ 1,783,426	\$ -	0.00%	\$ -
4	354	Structures and Improvements	\$ 18,930,587	\$ -	\$ 18,930,587	3.33%	\$ 630,389
5	355	Power Generation Equipment	\$ 543,670	\$ -	\$ 543,670	5.00%	\$ 27,184
6	360	Collection Services - Force	\$ 1,161,105	\$ -	\$ 1,161,105	2.00%	\$ 23,222
7	361	Collection Services - Gravity	\$ 23,094,661	\$ -	\$ 23,094,661	2.00%	\$ 461,893
8	362	Special Collecting Structures	\$ -	\$ -	\$ -	2.00%	\$ -
9	363	Services to Customers	\$ -	\$ -	\$ -	2.00%	\$ -
10	364	Flow Measuring Devices	\$ 47,019	\$ -	\$ 47,019	10.00%	\$ 4,702
11	365	Flow Measuring Installations	\$ -	\$ -	\$ -	10.00%	\$ -
12	366	Reuse Services	\$ 3,789,468	\$ -	\$ 3,789,468	2.00%	\$ 75,789
13	367	Reuse Meters and Installations	\$ 52,331	\$ -	\$ 52,331	8.33%	\$ 4,359
14	370	Receiving Wells	\$ 860,393	\$ -	\$ 860,393	3.33%	\$ 28,651
15	371	Effluent Pumping Equipment	\$ 1,754,419	\$ -	\$ 1,754,419	12.50%	\$ 219,302
16	374	Reuse Trans. And Dist. System	\$ 62,825	\$ -	\$ 62,825	2.50%	\$ 1,571
17	375	Reuse T&D	\$ 414,315	\$ -	\$ 414,315	2.50%	\$ 10,358
18	380	Treatment and Disposal Equipment	\$ 5,430,853	\$ -	\$ 5,430,853	5.00%	\$ 271,543
19	381	Plant Sewers	\$ 47,788	\$ -	\$ 47,788	5.00%	\$ 2,389
20	382	Outfall Sewer Lines	\$ 343,681	\$ -	\$ 343,681	3.33%	\$ 11,445
21	389	Other Plant & Misc. Equipment	\$ 601,188	\$ -	\$ 601,188	6.67%	\$ 40,099
22	390	Office Furniture & Equipment	\$ 198,772	\$ -	\$ 198,772	6.67%	\$ 13,258
23	391	Transportation Equipment	\$ 26,078	\$ -	\$ 26,078	20.00%	\$ 5,216
24	392	Stores Equipment	\$ 8,968	\$ -	\$ 8,968	4.00%	\$ 359
25	393	Tools, Shop & Garage Equipment	\$ 56,167	\$ -	\$ 56,167	5.00%	\$ 2,808
26	394	Labratory Equipment	\$ 173,948	\$ -	\$ 173,948	10.00%	\$ 17,395
27	395	Power Operated Equipment	\$ -	\$ -	\$ -	5.00%	\$ -
28	396	Communication Equipment	\$ 418,996	\$ -	\$ 418,996	10.00%	\$ 41,900
29	398	Other Tangible Plant	\$ -	\$ -	\$ -	10.00%	\$ -
30		Total Plant	\$ 59,800,658	\$ 1,783,426	\$ 58,017,232		\$ 1,893,831
31							
32		Composite Depreciation Rate (Depr Exp / Depreciable Plant):	3.26%				
33		CIAC: \$ 18,642,786					
34		Amortization of CIAC (Line 32 x Line 33):	\$ 608,548				
35							
36		Depreciation Expense Before Amortization of CIAC:	\$ 1,893,831				
37		Less Amortization of CIAC:	\$ 608,548				
38		<b>Test Year Depreciation Expense - Staff:</b>	<b>\$ 1,285,283</b>				
39		Depreciation Expense - Company:	\$ 1,550,237				
40		<b>Staff's Total Adjustment:</b>	<b>\$ (264,954)</b>				

References:

Column [A]: Schedule JMM-WW4  
Column [B]: From Column [A]  
Column [C]: Column [A] - Column [B]  
Column [D]: Engineering Staff Report  
Column [E]: Column [C] x Column [D]

**OPERATING INCOME ADJUSTMENT #7 - Property Tax Expense**

LINE NO.	Property Tax Calculation	STAFF AS ADJUSTED	STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$ 6,356,374	\$ 6,356,374
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	12,712,748	\$ 12,712,748
4	Staff Recommended Revenue, Per Schedule JMM-WW1	6,356,374	\$ 9,197,992
5	Subtotal (Line 4 + Line 5)	19,069,122	21,910,740
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	6,356,374	\$ 7,303,580
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	12,712,748	\$ 14,607,160
10	Plus: 10% of CWIP -	39,301	39,301
11	Less: Net Book Value of Licensed Vehicles	15,573	\$ 15,573
12	Full Cash Value (Line 9 + Line 10 - Line 11)	12,736,476	\$ 14,630,888
13	Assessment Ratio	21.0%	21.0%
14	Assessment Value (Line 12 * Line 13)	2,674,660	\$ 3,072,486
15	Composite Property Tax Rate (Per Company Schedule C-2)	4.1459%	4.1459%
16			
17	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$ 110,889	
18	Company Proposed Property Tax	336,629	
19			
20	Staff Test Year Adjustment (Line 17-Line 18)	<u>\$ (225,740)</u>	
21	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 127,382
22	Staff Test Year Adjusted Property Tax Expense (Line 17)		\$ 110,889
23	Increase in Property Tax Expense Due to Increase in Revenue Requirement		<u>\$ 16,493</u>
24			
25	Increase to Property Tax Expense		\$ 16,493
26	Increase in Revenue Requirement		2,841,618
27	Increase to Property Tax per Dollar Increase in Revenue (Line 25/Line 26)		0.580426%

OPERATING INCOME ADJUSTMENT NO. 8 - TEST YEAR INCOME TAXES

LINE  
NO.

DESCRIPTION

	<u>Test Year</u>
1 Revenue (Schedule CSB-11)	\$ 6,356,374
2 Operating Expenses Excluding Income Taxes	\$ 5,478,883
3 Synchronized Interest (L17)	\$ 302,195
4 Arizona Taxable Income (L1 - L2 - L3)	\$ 575,295
5 Arizona State Income Tax Rate	6.9680%
6 Arizona Income Tax (L4 x L5)	\$ 40,087
7 Federal Taxable Income (L4 - L6)	\$ 535,209
8 Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 7,500
9 Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ 6,250
10 Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ 8,500
11 Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ 91,650
12 Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ 68,071
13 Total Federal Income Tax	\$ 181,971
14 Combined Federal and State Income Tax (L44 + L51)	<u>\$ 222,058</u>
15	
16	
17 <u>Calculation of Interest Synchronization:</u>	
18 Rate Base (Schedule JMM-WW4)	\$ 27,472,314
19 Weighted Average Cost of Debt	1.10%
20 Synchronized Interest (L16 x L17)	<u>\$ 302,195</u>
21	
22	
23	Income Tax - Per Staff \$ 222,058
24	Income Tax - Per Company \$ (99,906)
25	<b>Staff Adjustment \$ 321,964</b>

BEFORE THE ARIZONA CORPORATION COMMISSION

KRISTIN K. MAYES  
Chairman  
GARY PIERCE  
Commissioner  
PAUL NEWMAN  
Commissioner  
SANDRA D. KENNEDY  
Commissioner  
BOB STUMP  
Commissioner

IN THE MATTER OF THE APPLICATION OF ) DOCKET NO. SW-01428A-09-0103  
LITCHFIELD PARK SERVICE COMPANY, )  
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. )

IN THE MATTER OF THE APPLICATION OF ) DOCKET NO. W-01427A-09-0104  
LITCHFIELD PARK SERVICE COMPANY, )  
AN ARIZONA CORPORATION, FOR A )  
DETERMINATION OF THE FAIR VALUE OF )  
ITS UTILITY PLANTS AND PROPERTY AND )  
FOR INCREASES IN ITS WATER RATES AND )  
CHARGES FOR UTILITY SERVICE BASED )  
THEREON. )

DIRECT

TESTIMONY

OF

PEDRO M. CHAVES

PUBLIC UTILITIES ANALYST III

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

NOVEMBER 4, 2009

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**EXECUTIVE SUMMARY  
LITCHFIELD PARK SERVICE COMPANY  
DOCKET NOS. SW-01428A-09-0103 AND W-01427A-09-0104**

On March 9, 2009, Litchfield Park Service Company ("LPSCO" or "Company") filed a general rate application for both its Water Division and Wastewater Division. The testimony of Mr. Pedro M. Chaves presents Staff's recommended rate design for both Divisions.

*Water Division*

The present rate design for the Water Division consists of an inverted two-tier and minimum monthly charges that generally increase by meter size. Fixed monthly charges also apply to construction water hydrants.

The Company proposes an inverted three-tier commodity rate for residential customers with 5/8 x 3/4-inch and 3/4-inch meters. An inverted two-tier commodity rate design is proposed for all other metered water customers with the exception of construction water for which a single tier commodity rate is proposed. A residential 3/4-inch meter customer consuming the median usage of 7,000 gallons per month under the Company's proposed rates would be billed \$35.33, which is \$20.04 more than the current \$15.29 for a 131.07 percent increase.

Staff recommends an inverted three-tier commodity rate structure for 5/8 x 3/4-inch and 3/4-inch meters and an inverted two-tier rate structure for larger meters. The two-tier rate structure for larger meters is accomplished by eliminating the first tier rate applicable to smaller meters. Monthly minimum charges increase by meter size. The recommended rate structure conforms with those regularly adopted by the Commission in recent years. Staff's rate design recognizes the growing importance of managing water as a finite resource and encourages efficient water use. Staff's rate structure provides an economic benefit to customers that limit consumption.

Under Staff's proposed rate design, the typical 3/4-inch meter residential bill with median use of 7,000 gallons would increase by \$4.71, or 30.80 percent, from \$15.29 to \$20.00.

*Wastewater Division*

The Company has ten customer classes for its wastewater division. All customers currently pay a monthly minimum charge, and two customer classes also pay a volumetric rate based on water consumption. The Company and Staff both recommend continuation of the existing rate structure with uniform increases to the monthly charges and volumetric charges. The average increases under the Company-proposed and Staff-recommended rates are 79.76 percent and 42.58 percent, respectively.

The Company's proposed rates would increase the monthly bill for a residential customer under the flat monthly fee rate by \$22.02, or 80.96 percent, from \$27.20 to \$49.22. The Company's proposed rates would increase the monthly bill for a measured-service regular

domestic customer consuming the median usage of 23,000 gallons per month by \$62.70, or 80.90 percent, from \$77.50 to \$140.20.

Staff's recommended rates would increase the monthly bill for a residential customer under the flat monthly fee rate by \$12.00, or 44.10 percent, from \$27.20 to \$39.20. Staff's recommended rates would increase the monthly bill for a measured service regular domestic customer consuming the median usage of 23,000 gallons per month by \$34.18, or 44.10 percent, from \$77.50 to \$111.68.

1 **INTRODUCTION**

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

3 A. My name is Pedro M. Chaves. I am a Public Utilities Analyst employed by the Arizona  
4 Corporation Commission (“ACC” or “Commission”) in the Utilities Division (“Staff”).  
5 My business address is 1200 West Washington Street, Phoenix, Arizona 85007.  
6

7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst.**

8 A. In my capacity as a Public Utilities Analyst, I perform studies to estimate the cost of  
9 capital component of the overall revenue requirement calculation in rate filings. I also  
10 analyze requests for financing authorization, analyze and examine accounting, financial,  
11 statistical and other information and prepare reports based on my analyses that present  
12 Staff’s recommendations to the Commission on utility revenue requirements, rate design  
13 and other financial regulatory matters.  
14

15 **Q. Please describe your educational background and professional experience.**

16 A. I am a graduate of Arizona State University where I received a Bachelor of Science degree  
17 in Global Business with a specialization in finance. My course of studies included classes  
18 in corporate and international finance, investments, accounting, statistics, and economics.  
19 I began employment as a Staff Public Utilities Analyst in December 2005. I have also  
20 attended the National Association of Regulatory Utility Commissioners’ (“NARUC”)  
21 Utility Rate School.  
22

23 **Q. What is the scope of your testimony in this case?**

24 A. My testimony provides Staff’s recommended rate designs for Litchfield Park Service  
25 Company’s (“LPSCO” or “Company”) Water and Wastewater Divisions in this case.  
26

1 **Q. Have you reviewed the rate design testimony submitted by the Company in this case?**

2 A. Yes. I reviewed Company witness Mr. Thomas J. Bourassa's testimony pertaining to rate  
3 design.

4

5 **SUMMARY OF TESTIMONY AND RECOMMENDATIONS**

6 **Q. Briefly summarize how your rate design testimony is organized.**

7 A. Staff's rate design testimony is organized to present a discussion of the present rates, the  
8 Company's proposed rates, and Staff's recommended rates for LPSCO's Water and  
9 Wastewater Divisions. Schedules PMC-1 W and PMC-2 W are provided to further  
10 describe Staff's rate design for the Water Division; and Schedules PMC-1 WW and PMC-  
11 2 WW are provided to further describe Staff's rate design for the Wastewater Division.

12

13 **WATER DIVISION**

14 *Present Rate Design*

15 **Q. Please provide an overview of the Company's existing rates.**

16 A. The following is a general description of the present rate design. Details of the rate  
17 designs are presented on Staff Schedule PMC-1 W. The present rate design has minimum  
18 monthly charges that generally increase by meter size. For the most part, customers are  
19 distinguished by meter size of which there are ten. The ten meter sizes include residential,  
20 commercial, construction, and irrigation customers. In addition to the monthly minimum  
21 charge a two-tier commodity rate is applicable to most customers. However, construction  
22 customers pay a single-tier commodity rate.

23

1 *The Company's Proposed Water Rate Design*

2 **Q. Please provide an overview of the Company's proposed rate design.**

3 A. The Company's proposed rate design spreads the proposed rate increase across all the  
4 customer classes. The increase is accomplished by increasing both the monthly usage  
5 charges and the commodity charges.

6  
7 **Q. Does the Company propose changes to the structure of the rate design?**

8 A. Yes. The Company proposes changes to the tier structure similar to rate designs adopted  
9 by the Commission in other rate cases. The Company proposes an inverted three-tier rate  
10 design for 5/8-inch and 5/8 x 3/4-inch residential classes. An inverted two-tier commodity  
11 rate design is proposed for all other metered water customers, with the exception of  
12 construction water, for which a single tier commodity rate is proposed.

13  
14 *Staff's Recommended Water Rate Design*

15 **Q. In addition to developing non-discriminatory rates that provide Staff's**  
16 **recommended revenue and other issues such as gradualism, revenue stability, and**  
17 **customer affordability, what policy objectives are reflected in Staff's recommended**  
18 **rates?**

19 A. Staff's rate design recognizes the growing importance of managing water as a finite  
20 resource, as well as the increasing cost of water. The quantity of water resources available  
21 to Arizona and in LPSCO's service territories does not grow with population and customer  
22 base and the cost of developing, treating, and delivering it increases with diminishing  
23 supply and increased health and safety regulations. Staff recommends a rate design that  
24 encourages planners to design growth to efficiently use water.

25

1 **Q. Please provide a description of Staff's recommended rate structure for the water**  
2 **systems.**

3 A. Staff recommends a three-tier inverted block rate structure for the residential 5/8 x 3/4-  
4 inch and 3/4-inch meters with break-over points at 3,000 gallons and at 9,000 gallons.  
5 Staff recommends a two-tier inverted block rate structure for all other metered water  
6 customers with the exception of construction water for which a single tier commodity rate  
7 is proposed. The recommended break-over points increase with meter size as shown in  
8 Schedule PMC-1 W. Under the recommended rate design, the monthly bill at any usage  
9 level is higher for a larger meter than for a smaller meter.

10  
11 **Q. What is the basis for Staff's recommendation for the respective commodity break-**  
12 **over points?**

13 A. Use of the break-over points Staff recommends serves two purposes. First, it supports the  
14 state-wide effort to improve water use efficiency. Second, an unintended but desirable  
15 characteristic of Staff's rate design is that it effectively serves as a supplementary life-line  
16 rate providing affordable water to customers willing to limit consumption to their basic  
17 needs. Providing affordable water in limited amounts is appropriate because water is the  
18 only utility commodity that is necessary for sustaining life.

19  
20 **Q. Did Staff prepare schedules showing the present, Company proposed, and Staff**  
21 **recommended monthly minimums and commodity rates for each rate class?**

22 A. Yes. Staff Schedule PMC-1 W shows the present monthly minimum charges and  
23 commodity rates, the Company's proposed monthly minimum charges and commodity  
24 rates and Staff's recommended monthly minimum charges and commodity rates.

25

1 **Q. Did Staff prepare a schedule showing a typical bill analysis under present rates, the**  
2 **Company's proposed rates, and Staff's recommended rates?**

3 A. Yes. Staff Schedule PMC-2 W presents the average and median monthly typical bill using  
4 present rates, the Company's proposed rates and Staff's recommended rates.

5  
6 **Q. Did LPSCO propose any changes to its water system service charges?**

7 A. No. The Company's proposed service charges are shown on the Company's Water  
8 Division Schedule H-3.

9  
10 **Q. What comment does Staff have regarding the Company's proposed service charges?**

11 A. Staff agrees with the Company that its current service charges are appropriate and should  
12 remain unchanged.

13  
14 **Q. Did LPSCO propose any changes to its water system service line and meter**  
15 **installation charges?**

16 A. Yes. The Company's proposed service line and meter installation charges are shown on  
17 the Water Division Schedule H-3.

18  
19 **Q. What is Staff's recommendation for water system service line and meter installation**  
20 **charges?**

21 A. Staff recommends accepting the Company's proposed service line and meter installation  
22 charges because they comport with the determination of Staff witness Marlin Scott Jr. that  
23 the charges are within Staff's recommended range for these charges.

24

1 **Q. What is Staff's recommendation for a construction water rate?**

2 A. Staff recommends that all usage under this rate be charged at a rate of \$2.68 per 1,000  
3 gallons. The Company currently has a monthly usage charge of \$100.00 for construction  
4 water. Staff recommends no monthly usage charge for construction water, since this class  
5 already pays the highest tier rate for all consumption. Staff further recommends meter  
6 deposits for construction customers equal to the meter portion of the service line and  
7 meter installation charges that are meter size dependent. This recommendation replaces  
8 the existing \$1,500.00 deposit for all meter sizes.

9

10 **WASTEWATER DIVISION**

11 *Present Rate Design*

12 **Q. Please provide an overview of the Company's existing rates.**

13 A. The following is a general description of the present rate design. Details of the rate  
14 designs are presented on Staff Schedule PMC-1 WW. The Company has ten customer  
15 classes (approximately 14,500 customers) for its wastewater division. All customers  
16 presently pay a monthly minimum charge, and two customer classes (approximately 200  
17 customers) also pay a volumetric rate based on water consumption.

18

19 *The Company's Proposed Wastewater Rate Design*

20 **Q. Please provide an overview of the Company's proposed rate design.**

21 A. The Company proposes a continuation of the existing rate structure with uniform increases  
22 to the monthly charges and volumetric charges. The Company proposes average increases  
23 of 79.76 percent. The Company's proposed rates would result in an 80.96 percent  
24 increase for the residential class, as seen on Schedule PMC-2 WW. The Company  
25 proposes no changes to service charges.

26

1 *Staff's Recommended Wastewater Rate Design*

2 **Q. Please provide an overview of Staff's recommended rate design.**

3 A. Staff recommends a continuation of the existing rate structure with uniform increases to  
4 the monthly charges and volumetric charges. Staff recommends average increases of  
5 42.58 percent. Staff recommends no changes to service charges.

6  
7 **Q. Has Staff prepared a typical bill analysis to reflect the effects of its recommended  
8 rate changes to the residential class?**

9 A. Yes. Staff's recommended rates would increase the monthly bill for a residential  
10 customer under the flat monthly fee rate by \$12.00, or 44.10 percent, from \$27.20 to  
11 \$39.20, as shown in Schedule PMC-2 WW. Staff's recommended rates would increase  
12 the monthly bill for a measured service regular domestic customer consuming the median  
13 usage of 23,000 gallons per month by \$34.18, or 44.10 percent, from \$77.50 to \$111.68,  
14 as shown in Schedule PMC-2 WW.

15  
16 **Q. Does this conclude your Direct Testimony?**

17 A. Yes, it does.

**WATER DIVISION RATE DESIGN**

Monthly Usage Charge	Present Rates	Company Proposed	Staff Recommended
5/8 x3/4" Meter - All Classes	\$ 6.75	\$ 12.35	\$ 10.00
3/4" Meter - All Classes	8.30	22.23	10.00
1" Meter - All Classes	14.60	37.05	32.00
1½" Meter - All Classes	28.60	74.10	53.00
2" Meter - All Classes	56.50	118.56	95.00
3" Meter - All Classes	NT	237.12	170.00
4" Meter - All Classes	132.00	370.50	340.00
6" Meter - All Classes	NT	741.00	680.00
8" Meter - All Classes	225.00	1,185.60	1,000.00
10" Meter - All Classes	330.00	1,704.30	1,600.00
12" Meter - All Classes	450.00	2,223.00	2,200.00
Construction Water - Hydrants	100.00	237.12	-
<b>Commodity Rates</b>			
5/8 x3/4" Meter (Residential)			
0 to 5,000 Gallons	\$ 0.87		
Over 5,000 Gallons	\$ 1.32		
0 to 5,000 Gallons		\$ 1.70	
5,001 to 15,000 Gallons		\$ 2.30	
Over 15,000 Gallons		\$ 3.05	
0 to 3,000 Gallons			\$ 1.00
3,001 to 9,000 Gallons			\$ 1.75
Over 9,000 Gallons			\$ 2.68
3/4" Meter (Residential)			
0 to 5,000 Gallons	\$ 0.87		
Over 5,000 Gallons	\$ 1.32		
0 to 5,000 Gallons		\$ 1.70	
5,001 to 15,000 Gallons		\$ 2.30	
Over 15,000 Gallons		\$ 3.05	
0 to 3,000 Gallons			\$ 1.00
3,001 to 9,000 Gallons			\$ 1.75
Over 9,000 Gallons			\$ 2.68
5/8 x3/4" and 3/4" Meter (Commercial, Industrial, Irrigation)			
0 to 5,000 Gallons	\$ 0.87		
Over 5,000 Gallons	\$ 1.32		
0 to 15,000 Gallons		\$ 2.30	
Over 15,000 Gallons		\$ 3.05	
0 to 10,000 Gallons			\$ 1.75
Over 10,000 Gallons			\$ 2.68
1" Meter (Residential, Commercial, Industrial, Irrigation)			
0 to 5,000 Gallons	\$ 0.87		
Over 5,000 Gallons	\$ 1.32		
0 to 40,000 Gallons		\$ 2.30	
Over 40,000 Gallons		\$ 3.05	
0 to 20,000 Gallons			\$ 1.75
Over 20,000 Gallons			\$ 2.68
1½" Meter (Residential, Commercial, Industrial, Irrigation)			
0 to 5,000 Gallons	\$ 0.87		
Over 5,000 Gallons	\$ 1.32		
0 to 90,000 Gallons		\$ 2.30	
Over 90,000 Gallons		\$ 3.05	
0 to 30,000 Gallons			\$ 1.75
Over 30,000 Gallons			\$ 2.68

**WATER DIVISION RATE DESIGN**

	Present Rates	Company Proposed	Staff Recommended
<b>2" Meter (Residential, Commercial, Industrial, Irrigation)</b>			
0 to 5,000 Gallons	\$ 0.87		
Over 5,000 Gallons	\$ 1.32		
0 to 140,000 Gallons		\$ 2.30	
Over 140,000 Gallons		\$ 3.05	
0 to 55,000 Gallons			\$ 1.75
Over 55,000 Gallons			\$ 2.68
<b>3" Meter (Residential, Commercial, Industrial, Irrigation)</b>			
0 to 5,000 Gallons	\$ 0.87		
Over 5,000 Gallons	\$ 1.32		
0 to 140,000 Gallons		\$ 2.30	
Over 140,000 Gallons		\$ 3.05	
0 to 100,000 Gallons			\$ 1.75
Over 100,000 Gallons			\$ 2.68
<b>4" Meter (Residential, Commercial, Industrial, Irrigation)</b>			
0 to 5,000 Gallons	\$ 0.87		
Over 5,000 Gallons	\$ 1.32		
0 to 440,000 Gallons		\$ 2.30	
Over 440,000 Gallons		\$ 3.05	
0 to 210,000 Gallons			\$ 1.75
Over 210,000 Gallons			\$ 2.68
<b>6" Meter (Residential, Commercial, Industrial, Irrigation)</b>			
0 to 5,000 Gallons	\$ 0.87		
Over 5,000 Gallons	\$ 1.32		
0 to 1,620,000 Gallons		\$ 2.30	
Over 1,620,000 Gallons		\$ 3.05	
0 to 430,000 Gallons			\$ 1.75
Over 430,000 Gallons			\$ 2.68
<b>8" Meter (Residential, Commercial, Industrial, Irrigation)</b>			
0 to 5,000 Gallons	\$ 0.87		
Over 5,000 Gallons	\$ 1.32		
0 to 1,620,000 Gallons		\$ 2.30	
Over 1,620,000 Gallons		\$ 3.05	
0 to 650,000 Gallons			\$ 1.75
Over 650,000 Gallons			\$ 2.68
<b>10" Meter (Residential, Commercial, Industrial, Irrigation)</b>			
0 to 5,000 Gallons	\$ 0.87		
Over 5,000 Gallons	\$ 1.32		
0 to 2,280,000 Gallons		\$ 2.30	
Over 2,280,000 Gallons		\$ 3.05	
0 to 950,000 Gallons			\$ 1.75
Over 950,000 Gallons			\$ 2.68
<b>12" Meter (Residential, Commercial, Industrial, Irrigation)</b>			
0 to 5,000 Gallons	\$ 0.87		
Over 5,000 Gallons	\$ 1.32		
0 to 4,030,000 Gallons		\$ 2.30	
Over 4,030,000 Gallons		\$ 3.05	
0 to 1,600,000 Gallons			\$ 1.75
Over 1,600,000 Gallons			\$ 2.68
<b>Construction Water</b>			
All Gallons	\$ 2.50	\$ 3.05	\$ 2.68

**WATER DIVISION RATE DESIGN**

Service Line and Meter Installation Charges	Present Rates			Company Proposed			Staff Recommended		
	Line	Meter	Total	Line	Meter	Total	Line	Meter	Total
5/8" x 3/4" Meter			\$ 300	\$ 385	\$ 135	\$ 520	\$ 385	\$ 135	\$ 520
3/4" Meter			300	385	215	600	385	215	600
1" Meter			325	435	255	690	435	255	690
1½" Meter			500	470	465	935	470	465	935
2"			675	-	-	-	-	-	-
Over 2"			At Cost	-	-	-	-	-	-
2" Turbine Meter			NT	630	965	1,595	630	965	1,595
2" Compound Meter			NT	630	1,690	2,320	630	1,690	2,320
3" Turbine Meter			NT	805	1,470	2,275	805	1,470	2,275
3" Compound Meter			NT	845	2,265	3,110	845	2,265	3,110
4" Turbine Meter			NT	1,170	2,350	3,520	1,170	2,350	3,520
4" Compound Meter			NT	1,230	3,245	4,475	1,230	3,245	4,475
6" Turbine Meter			NT	1,730	4,545	6,275	1,730	4,545	6,275
6" Compound Meter			NT	1,770	6,280	8,050	1,770	6,280	8,050
8" & Larger			NT	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost

**Service Charges**

Establishment (a)	\$ 20.00	\$ 20.00	\$ 20.00
Establishment (After Hours) (a)	40.00	40.00	40.00
Re-Establishment of Service (a)	(b)	(b)	(b)
Reconnection (Regular Hours) (a)	50.00	50.00	50.00
Reconnection (After Hours) (a)	65.00	65.00	65.00
Meter Test (if correct) (c)	25.00	25.00	25.00
Meter Re-Read (If correct)	5.00	5.00	5.00
NSF Check	25.00	25.00	25.00
Deferred Payment, Per Month	1.50%	1.50%	1.50%
Late Charge	(d)	(d)	(d)
Service Calls - Per Hour/After Hours (e)	40.00	40.00	40.00
Deposit Requirement	(f)	(f)	(f)
Deposit Interest	3.50%	3.50%	3.50%

\* Hydrant Meter Deposit:

5/8" x 3/4" Meter	\$ 1,500.00	\$ 1,500.00	\$ 135.00
3/4" Meter	1,500.00	1,500.00	215.00
1" Meter	1,500.00	1,500.00	255.00
1½" Meter	1,500.00	1,500.00	465.00
2" Turbine Meter	1,500.00	1,500.00	965.00
2" Compound Meter	1,500.00	1,500.00	1,690.00
3" Turbine Meter	1,500.00	1,500.00	1,470.00
3" Compound Meter	1,500.00	1,500.00	2,265.00
4" Turbine Meter	1,500.00	1,500.00	2,350.00
4" Compound Meter	1,500.00	1,500.00	3,245.00
6" Turbine Meter	1,500.00	1,500.00	4,545.00
6" Compound Meter	1,500.00	1,500.00	6,280.00
8" & Larger	NT	At Cost	At Cost

NT = No Tariff

(a) Service charges for customers taking both water and sewer service are not duplicative.

(b) Minimum charge times number of months disconnected.

(c) \$25 plus cost of test.

(d) Greater of \$5.00 or 1.5% of unpaid balance.

(e) No charge for service calls during normal working hours.

(f) Per Rule R14-2-403(B): Residential - two times the average bill. Commercial - two and one-half times the average bill.

\* Shall have a non-interest bearing deposit of the amount indicated, refundable in its entirety upon return of the meter in good condition and payment of final bill.

**Typical Bill Analysis**  
 3/4" Residential

Company Proposed	Gallons	Present Rates	Proposed Rates	Dollar Increase	Percent Increase
Average Usage	9,537	\$ 18.64	\$ 41.17	\$ 22.53	120.86%
Median Usage	7,000	15.29	35.33	\$ 20.04	131.07%
<b>Staff Recommended</b>					
Average Usage	9,537	\$ 18.64	\$ 24.94	\$ 6.30	33.80%
Median Usage	7,000	15.29	20.00	\$ 4.71	30.80%

**Present & Proposed Rates (Without Taxes)**  
 3/4" Residential

Gallons Consumption	Present Rates	Company Proposed Rates	% Increase	Staff Recommended Rates	% Increase
-	\$ 8.30	\$ 22.23	167.83%	\$ 10.00	20.48%
1,000	9.17	23.93	160.96%	11.00	19.96%
2,000	10.04	25.63	155.28%	12.00	19.52%
3,000	10.91	27.33	150.50%	13.00	19.16%
4,000	11.78	29.03	146.43%	14.75	25.21%
5,000	12.65	30.73	142.92%	16.50	30.43%
6,000	13.97	33.03	136.44%	18.25	30.64%
7,000	15.29	35.33	131.07%	20.00	30.80%
8,000	16.61	37.63	126.55%	21.75	30.95%
9,000	17.93	39.93	122.70%	23.50	31.07%
9,537	18.64	41.17	120.86%	24.94	33.80%
10,000	19.25	42.23	119.38%	26.18	36.00%
11,000	20.57	44.53	116.48%	28.86	40.30%
12,000	21.89	46.83	113.93%	31.54	44.08%
13,000	23.21	49.13	111.68%	34.22	47.44%
14,000	24.53	51.43	109.66%	36.90	50.43%
15,000	25.85	53.73	107.85%	39.58	53.11%
16,000	27.17	56.03	106.22%	42.26	55.54%
17,000	28.49	58.33	104.74%	44.94	57.74%
18,000	29.81	60.63	103.39%	47.62	59.75%
19,000	31.13	62.93	102.15%	50.30	61.58%
20,000	32.45	65.23	101.02%	52.98	63.27%
25,000	39.05	76.73	96.49%	66.38	69.99%
30,000	45.65	88.23	93.27%	79.78	74.76%
35,000	52.25	99.73	90.87%	93.18	78.33%
40,000	58.85	111.23	89.01%	106.58	81.10%
45,000	65.45	122.73	87.52%	119.98	83.32%
50,000	72.05	134.23	86.30%	133.38	85.12%
75,000	105.05	191.73	82.51%	200.38	90.75%
100,000	138.05	249.23	80.54%	267.38	93.68%

**WASTEWATER DIVISION RATE DESIGN**

Monthly Usage Charge	Present	Company Proposed	Staff Recommended
Residential	\$ 27.20	\$ 49.22	\$ 39.20
Multiple Unit Service - Per Unit / Month	25.25	45.69	36.39
Small Comm.	46.00	83.00	\$ 66.29
Regular Domestic <sup>1</sup>	25.75	46.59	\$ 37.11
Restaurants, Motels, Grocery, DC	25.75	46.59	\$ 37.11
Wig. Resort/ Room	25.25	45.69	\$ 36.39
Wig. Resort/ Main	1,000.00	1,809.50	\$ 1,441.00
Element. School	680.00	1,230.46	\$ 979.88
Mid. & High School	800.00	1,447.60	\$ 1,152.80
Community College	1,240.00	2,243.78	\$ 1,786.84
Effluent Sales <sup>2</sup>	Market	Market	Market

<sup>1</sup> Regular Domestic is a wastewater customer (including residential) that averages a minimum of 10,000 gallons of water usage per month during the months of December, January and February.

<sup>2</sup> Market Rate - Maximum effluent rate shall not exceed \$430 per acre foot based on a potable water rate of \$1.32 per thousand gallons and shall not be less than \$ 0.88 per thousand gallons.

Commodity Charge (per 1,000 gallons of water)			
Regular Domestic	\$ 2.25	\$ 4.07	\$ 3.24
Restaurants, Motels, Grocery, DC	3.00	5.43	4.32



**Typical Bill Analysis**

**Residential**

<u>Company Proposed</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
	\$ 27.20	\$ 49.22	\$ 22.02	80.96%
<u>Staff Recommended</u>				
	27.20	39.20	\$ 12.00	44.10%

**Regular Domestic**

<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	57,450	\$ 155.01	\$ 280.41	\$ 125.40	80.90%
Median Usage	23,000	77.50	140.20	\$ 62.70	80.90%
<u>Staff Recommended</u>					
Average Usage	57,450	\$ 155.01	\$ 223.37	\$ 68.36	44.10%
Median Usage	23,000	77.50	111.68	\$ 34.18	44.10%

BEFORE THE ARIZONA CORPORATION COMMISSION

KRISTIN K. MAYES  
Chairman  
GARY PIERCE  
Commissioner  
SANDRA D. KENNEDY  
Commissioner  
PAUL NEWMAN  
Commissioner  
BOB STUMP  
Commissioner

IN THE MATTER OF THE APPLICATION OF )  
LITCHFIELD PARK SERVICE COMPANY, )  
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-01428A-09-0103

IN THE MATTER OF THE APPLICATION OF )  
LITCHFIELD PARK SERVICE COMPANY, )  
AN ARIZONA CORPORATION, FOR A )  
DETERMINATION OF THE FAIR VALUE )  
OF ITS UTILITY PLANTS AND PROPERTY )  
AND FOR INCREASES IN ITS WATER RATES )  
AND CHARGES FOR UTILITY SERVICE )  
BASED THEREON. )

DOCKET NO. W-01428A-09-0104

DIRECT

TESTIMONY

OF

JUAN C. MANRIQUE

PUBLIC UTILITIES ANALYST I

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

NOVEMBER 4, 2009

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**EXECUTIVE SUMMARY  
LITCHFIELD PARK SERVICE COMPANY  
DOCKET NOS. SW-01428A-09-0103 & W-01427A-09-0104**

The Direct Testimony of Staff witness Juan C. Manrique addresses the following issues:

Capital Structure – Staff recommends that the Commission adopt a capital structure for Litchfield Park Service Company (“Applicant”) for this proceeding consisting of 17.2 percent debt and 82.8 percent equity.

Cost of Equity – Staff recommends that the Commission adopt a 9.2 percent return on equity (“ROE”) for the Applicant. Staff’s estimated ROE for the Applicant is based on cost of equity estimates for the sample companies ranging from 9.7 percent for the discounted cash flow method (“DCF”) to 10.2 percent for the capital asset pricing model (“CAPM”). Staff’s ROE recommendation includes a 0.8 percent downward adjustment to reflect a lower financial risk in the Applicant’s capital structure compared to that of the sample companies.

Overall Rate of Return – Staff recommends that the Commission adopt an overall rate of return (“ROR”) of 8.7 percent.

Mr. Bourassa’s Testimony – The Commission should reject the Company’s proposed 11.4 percent ROE for the following reasons:

1. Mr. Bourassa’s DCF estimates rely exclusively on analysts forecasts. In addition, Mr. Bourassa’s DCF constant growth analysis does not include dividend growth.

1 **I. INTRODUCTION**

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

3 A. My name is Juan C. Manrique. I am a Public Utilities Analyst employed by the Arizona  
4 Corporation Commission (“ACC” or “Commission”) in the Utilities Division (“Staff”).  
5 My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

6  
7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst.**

8 A. In my position as a Public Utilities Analyst, I perform studies to estimate the cost of  
9 capital component in rate filings to determine the overall revenue requirement and analyze  
10 requests for financing authorizations.

11  
12 **Q. Please describe your educational background and professional experience.**

13 A. I graduated from Arizona State University and received a Bachelor of Science degree in  
14 Finance. My course of studies included courses in corporate and international finance,  
15 investments, accounting, statistics, and economics. I began employment as a Staff Public  
16 Utilities Analyst in October 2008. My professional experience includes two years as a  
17 Loan Officer with a homebuilder and as an Associate for an Investor Relations firm.

18  
19 **Q. What is the scope of your testimony in this case?**

20 A. My testimony provides Staff’s recommended capital structure, return on equity (“ROE”)  
21 and overall rate of return (“ROR”) for establishing the revenue requirements for Litchfield  
22 Park Service Company’s (“LPSCO” or “Applicant”) pending water division and  
23 wastewater division rate applications.

24

1 **Q. Please provide a brief description of LPSCO.**

2 A. LPSCO is an Arizona Corporation that is engaged in the business of providing public  
3 water and wastewater utility service in cities of Litchfield Park, Avondale, Goodyear and  
4 unincorporated areas of Maricopa County, Arizona.

5  
6 **Q. Please provide a brief description of LPSCO and its relation to affiliates.**

7 A. LPSCO is owned by Algonquin Water Resources of America, Inc. ("AWRA"). AWRA is  
8 an indirect wholly owned subsidiary of Algonquin Power Income Fund which is publicly  
9 traded on the Toronto Stock Exchange. LPSCO is a sister company to other public service  
10 corporations regulated by the Commission including: Bella Vista Water Company, Black  
11 Mountain Sewer Corporation, Northern Sunrise Water Company, Southern Sunrise Water  
12 Company, Rio Rico Utilities, Inc. and Gold Canyon Sewer Company.

13  
14 **Q. Please explain the relevance of using six water companies as a proxy for the  
15 wastewater division of LPSCO.**

16 A. While the provision of wastewater service is different from the provision of water service,  
17 water and wastewater utilities are subject to similar risk factors and regulatory oversight.  
18 Therefore, the sample water companies are an appropriate proxy for the wastewater  
19 division of LPSCO.

20  
21 *Summary of Testimony and Recommendations*

22 **Q. Briefly summarize how Staff's cost of capital testimony is organized.**

23 A. Staff's cost of capital testimony is presented in ten sections. Section I is this introduction.  
24 Section II discusses the concept of weighted average cost of capital ("WACC"). Section  
25 III presents the concept of capital structure and presents Staff's recommended capital  
26 structure for LPSCO in this proceeding. Section IV discusses the concepts of return on

1 equity ("ROE") and risk. Section V presents the methods employed by Staff to estimate  
2 LPSCO's ROE. Section VI presents the findings of Staff's ROE analysis. Section VII  
3 presents Staff's final cost of equity estimates for LPSCO. Section VIII presents Staff's  
4 ROR recommendation. Section IX presents Staff's comments on the Direct Testimony of  
5 the Applicant's witness, Mr. Thomas J. Bourassa. Finally, Section X presents the  
6 conclusions.

7  
8 **Q. Have you prepared any exhibits to accompany your testimony?**

9 A. Yes. I prepared eight schedules (JCM-1 to JCM-9) that support Staff's cost of capital  
10 analysis.

11  
12 **Q. What is Staff's recommended rate of return for LPSCO?**

13 A. Staff recommends an 8.7 percent overall ROR as shown in Schedule JCM-1. Staff's ROR  
14 recommendation is based on cost of equity estimates for LPSCO that range from 9.7  
15 percent using the discounted cash flow method ("DCF") to 10.2 percent using the capital  
16 asset pricing model ("CAPM"). Staff's ROR recommendation reflects a 0.8 percent  
17 downward adjustment to the estimated ROE to account for a lower financial risk in the  
18 Applicant's capital structure compared to that of the sample companies

19  
20 *LPSCO's Proposed Overall Rate of Return*

21 **Q. Briefly summarize LPSCO's proposed capital structure, cost of debt, return on  
22 equity and overall rate of return for this proceeding.**

23 A. Table 1 summarizes the Applicant's proposed capital structure, cost of debt, return on  
24 equity and overall rate of return in this proceeding:

25

Table 1

	Weight	Cost	Weighted Cost
Long-term Debt	17.5%	6.39%	1.1%
Common Equity	82.5%	12.5%	10.3%
<b>Cost of Capital/ROR</b>			<b>11.4%</b>

LPSCO is proposing an overall rate of return of 11.4 percent.

## II. THE WEIGHTED AVERAGE COST OF CAPITAL

**Q. Briefly explain the cost of capital concept.**

A. The cost of capital is the opportunity cost of choosing one investment over others with equivalent risk. In other words, the cost of capital is the return that stakeholders expect for investing their financial resources in a determined business venture over another business venture.

**Q. What is the overall cost of capital?**

A. The cost of capital to a company issuing a variety of securities (i.e., stock and indebtedness) is an average of the cost rates on all issued securities adjusted to reflect the relative amounts for each security in the company's entire capital structure. Thus, the overall cost of capital is the weighted average cost of capital ("WACC").

**Q. How is the WACC calculated?**

A. The WACC is calculated by adding the weighted expected returns of a firm's securities. The WACC formula is:

1 Equation 1.

2  
3 
$$\text{WACC} = \sum_{i=1}^n W_i * r_i$$
  
4

5 In this equation,  $W_i$  is the weight given to the  $i^{\text{th}}$  security (the proportion of the  $i^{\text{th}}$  security  
6 relative to the portfolio) and  $r_i$  is the expected return on the  $i^{\text{th}}$  security.

7  
8 **Q. Can you provide an example demonstrating application of Equation 1?**

9 **A.** Yes. For this example, assume that an entity has a capital structure composed of 60  
10 percent debt and 40 percent equity. Also, assume that the embedded cost of debt is 6.0  
11 percent and the expected return on equity, i.e. the cost of equity, is 10.5 percent.  
12 Calculation of the WACC is as follows:

13  
14 
$$\text{WACC} = (60\% * 6.0\%) + (40\% * 10.5\%)$$

15 
$$\text{WACC} = 3.60\% + 4.20\%$$

16 
$$\text{WACC} = 7.80\%$$
  
17  
18

19 The weighted average cost of capital in this example is 7.80 percent. The entity in this  
20 example would need to earn an overall rate of return of 7.80 percent to cover its cost of  
21 capital.  
22

1 **III. CAPITAL STRUCTURE**

2 *Background*

3 **Q. Please explain the capital structure concept.**

4 A. The capital structure of a firm is the relative proportions of each type of security short-  
5 term debt, long-term debt (including capital leases), preferred stock and common stock  
6 that are used to finance the firm's assets.

7  
8 **Q. How is the capital structure expressed?**

9 A. The capital structure of a company is expressed as the percentage of each component of  
10 the capital structure (capital leases, short-term debt, long-term debt, preferred stock and  
11 common stock) relative to the entire capital structure.

12  
13 As an example, the capital structure for an entity that is financed by \$20,000 of capital  
14 leases, \$85,000 of long-term debt, \$15,000 of preferred stock and \$80,000 of common  
15 stock is shown in Table 2.

16  
17 **Table 2**

Component			%
Capital Leases	\$20,000	(\$20,000/\$200,000)	10.0%
Long-Term Debt	\$85,000	(\$85,000/\$200,000)	42.5%
Preferred Stock	\$15,000	(\$15,000/\$200,000)	7.5%
Common Stock	\$80,000	(\$80,000/\$200,000)	40.0%
Total	\$200,000		100%

1           The capital structure in this example is composed of 0.0 percent short-term debt, 10.0  
2           percent capital leases, 42.5 percent long-term debt, 7.5 percent preferred stock and 40.0  
3           percent common stock.

4  
5           *LPSCO's Capital Structure*

6           **Q.    What capital structure does LPSCO propose?**

7           A.    The Applicant proposes a capital structure composed of 17.5 percent debt and 82.5 percent  
8           common equity.

9  
10          **Q.    How does LPSCO's capital structure compare to capital structures of publicly  
11          traded water utilities?**

12          A.    The Applicant's capital structure is composed of 17.2 percent debt and 82.8 percent  
13          equity. Schedule JCM-4 shows the capital structures of six publicly traded water  
14          companies ("sample water companies") as of March 2009. The average capital structure  
15          for the sample water utilities is comprised of approximately 50.8 percent debt and 49.2  
16          percent equity.

17  
18          *Staff's Capital Structure*

19          **Q.    What is Staff's recommended capital structure for LPSCO?**

20          A.    Staff recommends a capital structure composed of 17.2 percent debt and 82.8 percent  
21          equity.

22  
23          **Q.    Please explain the reason for the difference between Staff's capital structure and that  
24          of the Applicant.**

25          A.    Staff used the most recent capital structure submitted by LPSCO on October 14, 2009.

26

1 **IV. RETURN ON EQUITY**

2 *Background*

3 **Q. Please define the term “cost of equity capital”.**

4 A. The cost of equity is the rate of return that investors expect to earn on their investment in a  
5 business entity given its risk. In other words, the cost of equity to the entity is the  
6 investors’ expected rate of return on other investments of similar risk. As investors have a  
7 wide selection of stocks to choose from, they will choose stocks with similar risks but  
8 higher returns. Therefore, the market determines the entity’s cost of equity.

9  
10 **Q. Is there a correlation between interest rates and the cost of equity?**

11 A. Yes. The cost of equity tends to move in the same direction as interest rates. This  
12 relationship is part of the CAPM formula. The CAPM is a market based model employed  
13 by Staff for estimating the cost of equity. The CAPM is further discussed in Section V of  
14 this testimony.

15  
16 **Q. What has been the general trend of interest rates in recent years?**

17 A. A chronological chart of interest rates is a good tool to show interest rate history and  
18 identify trends. Chart 1 graphs intermediate U.S. treasury rates from September 1999 to  
19 September 2009.

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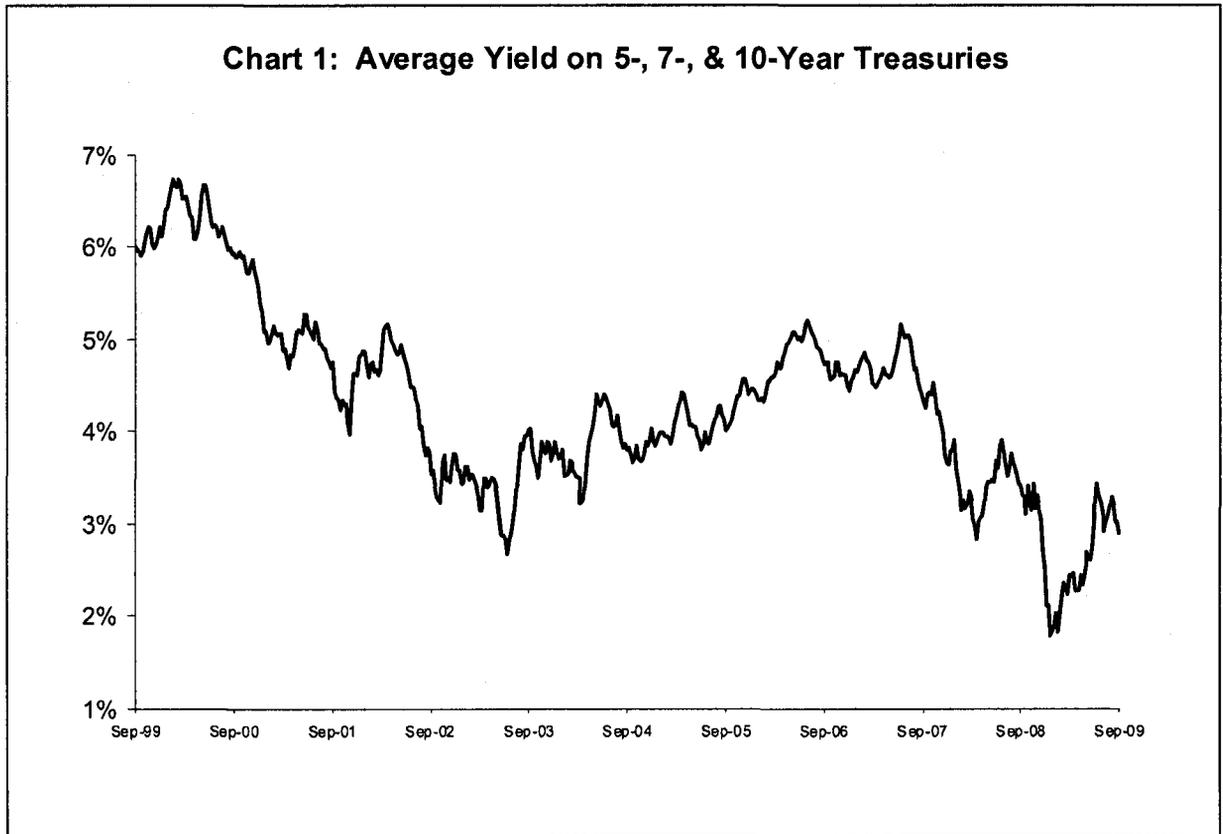


Chart 1 shows that intermediate interest rates trended downward from 2000 to mid-2003 then turned slightly upward until mid-2007 and have trended downward in the past two years.

**Q. What has been the general trend in interest rates longer term?**

A. U.S. Treasury rates from 1959 to present are shown in Chart 2. The chart shows that interest rates trended upward through the mid-1980s and have trended downward over the last 25 years.

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**Q. Do these trends suggest anything in terms of cost of equity?**

A. Yes. As previously demonstrated, interest rates and cost of equity tend to move in the same direction; therefore cost of equity has declined in the past 25 years.

**Q. Do actual returns represent the cost of equity?**

A. No. The cost of equity represents investors' *expected* returns and not realized returns.

1 **Q. Is there any information available that leads to an understanding of the relationship**  
2 **between the equity returns required for a regulated water utility and those required**  
3 **in the market as a whole?**

4 A. Yes. A comparison of betas, a component of the CAPM discussed in Section V, for the  
5 water utility industry and the market provide insight into this relationship. The average  
6 beta (0.82)<sup>1</sup> for a water utility is lower than the theoretical average beta for all stocks (1.0).  
7 According to the CAPM formula, the cost of equity capital moves in the same direction as  
8 beta. Since the beta for the water utility industry is lower than the beta for the market, the  
9 implication is that the required return on equity for a regulated water utility is below the  
10 average required return on the market.

11  
12 *Risk*

13 **Q. Please define risk in relation to cost of capital.**

14 A. Risk, as it relates to an investment, is the variability or uncertainty of the returns on a  
15 particular security. Investors are risk averse and require a greater potential return to invest  
16 in relatively greater risk opportunities, i.e., investors require compensation for taking on  
17 additional risk. Risk is generally separated into two components. Those components are  
18 market risk (systematic risk) and non-market risk (diversifiable risk or firm-specific risk).

19  
20 **Q. What is market risk?**

21 A. Market risk or systematic risk is the risk of an investment that cannot be reduced through  
22 diversification. Market risk stems from factors that affect all securities such as recessions,  
23 war, inflation and high interest rates. Since these factors affect the entire market they  
24 cannot be eliminated through diversification. Market risk does not impact each security to

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<sup>1</sup> See Schedule JCM-6

1 the same degree. The degree to which any security's returns is affected by the market can  
2 be measured using Beta. Beta reflects the business risk and the financial risk of a security.

3  
4 **Q. Please define business risk.**

5 A. Business risk is the fluctuation of earnings inherent in a firm's operations and environment  
6 such as competition and adverse economic conditions that may impair its ability to  
7 provide returns on investment. Companies in the same or similar line of business tend to  
8 experience the same fluctuations in business cycles.

9  
10 **Q. Please define financial risk.**

11 A. Financial risk is the fluctuation of earnings inherent in using debt financing by a firm that  
12 may impair its ability to provide adequate return. The more a company uses debt  
13 financing, the more the company becomes exposed to financial risk.

14  
15 **Q. Do business risk and financial risk affect the cost of equity?**

16 A. Yes.

17  
18 **Q. Is a firm subject to any other risk?**

19 A. Yes. Firms are also subject to unsystematic or firm-specific risk. Examples of  
20 unsystematic risk include losses caused by labor problems, nationalization of assets, loss  
21 of a big client or weather conditions. Investors can eliminate firm-specific risk by holding  
22 a diverse portfolio, thus, it is not of concern to diversified investors.

23

1 **Q. How does LPSCO's financial risk compare to the sample water companies' financial**  
2 **risk from the perspective of an investor?**

3 A. From an investor's perspective LPSCO's capital structure is less risky than the sample  
4 water companies. Schedule JCM-4 shows the capital structures of the six publicly traded  
5 water companies ("sample water companies") as of March 2009, as well as LPSCO's  
6 actual capital structure. As of March 2009, the sample water utilities were capitalized  
7 with approximately 50.8 percent debt and 49.2 percent equity, while LPSCO's actual  
8 capital structure consists of approximately 17.2 percent debt and 82.8 percent equity.  
9 Thus, LPSCO's shareholders bear less financial risk than the shareholders of the sample  
10 companies.

11  
12 **Q. Is firm-specific risk measured by beta?**

13 A. No. Firm-specific risk is not measured by beta.

14  
15 **Q. Is the cost of equity affected by firm-specific risk?**

16 A. No. Since firm-specific risk can be eliminated through diversification, it does not affect  
17 the cost of equity.

18  
19 **Q. Can investors expect additional returns for firm-specific risk?**

20 A. No. Investors who hold diversified portfolios can eliminate firm-specific risk, and  
21 consequently do not require any additional return. Since investors who choose to be less  
22 than fully diversified must compete in the market with fully diversified investors, the  
23 former cannot expect to be compensated for unique risk.

24

1 **V. ESTIMATING THE COST OF EQUITY**

2 *Introduction*

3 **Q. Did Staff directly estimate the cost of equity for LPSCO?**

4 A. No. Since LPSCO is not a publicly traded company, Staff is unable to directly estimate  
5 LPSCO's cost of equity due to the unavailability of financial information. Instead, Staff  
6 uses an average of a representative sample group to reduce the sample error resulting from  
7 random fluctuations in the market due to the moment in time at which the information is  
8 gathered.

9  
10 **Q. What companies did Staff select as proxies or comparables for LPSCO?**

11 A. Staff's sample consists of the following six publicly traded water utilities: American  
12 States Water, California Water, Connecticut Water Services, Middlesex Water, Aqua  
13 America and SJW Corp. These companies were chosen due to their being publicly traded  
14 and receiving the majority of their earnings from regulated operations.

15  
16 **Q. What models did Staff implement to estimate LPSCO's cost of equity?**

17 A. Staff used two market-based models to estimate the cost of equity for LPSCO: the DCF  
18 model and the CAPM.

19  
20 **Q. Please explain why Staff chose the DCF and CAPM models.**

21 A. Staff chose to use the DCF and CAPM models because they are widely recognized market  
22 based models and have been used extensively to estimate the cost of equity. An  
23 explanation of the DCF and CAPM models follows.

1 *Discounted Cash Flow Model Analysis*

2 **Q. Please provide a brief summary of the theory upon which the DCF method of**  
3 **estimating the cost of equity is based.**

4 A. The DCF method of stock valuation is based on the theory that the value of an investment  
5 is equal to the sum of the future cash flows generated from the aforementioned investment  
6 discounted to the present time. This method uses expected dividends, market price and  
7 dividend growth rate to calculate the cost of capital. Professor Myron Gordon pioneered  
8 the DCF method in the 1960s. The DCF method has become widely used to estimate the  
9 cost of equity for public utilities due to its theoretical merit and its simplicity. Staff used  
10 the financial information for the relevant six sample companies in the DCF model and  
11 averaged the results to determine an estimated cost of equity for the sample companies.

12  
13 **Q. Does Staff use more than one version of the DCF Model?**

14 A. Yes. Staff uses two versions of the DCF model: the constant-growth DCF Model and the  
15 multi-stage or non-constant growth DCF. The constant-growth DCF Model assumes that  
16 an entity's dividends will grow indefinitely at the same rate. The multi-stage growth DCF  
17 model assumes the dividend growth rate will change at some point in the future.

18  
19 The Constant-Growth DCF

20 **Q. What is the mathematical formula used in Staff's constant-growth DCF analysis?**

21 A. The constant-growth DCF formula used in Staff's analysis is:

Equation 2 :

$$K = \frac{D_1}{P_0} + g$$

where :     $K$     = the cost of equity  
               $D_1$     = the expected annual dividend  
               $P_0$     = the current stock price  
               $g$      = the expected infinite annual growth rate of dividends

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Equation 2 assumes that the entity has a constant earnings retention rate and that its earnings are expected to grow at a constant rate. According to Equation 2, a stock with a current market price of \$10 per share, an expected annual dividend of \$0.45 per share and an expected dividend growth rate of 3.0 percent per year has a cost of equity to the entity of 7.5 percent reflected by the sum of the dividend yield ( $\$0.45 / \$10 = 4.5$  percent) and the 3.0 percent annual dividend growth rate.

**Q. How did Staff calculate the dividend yield component ( $D_1/P_0$ ) of the constant-growth DCF formula?**

A. Staff calculated the yield component of the DCF formula by dividing the expected annual dividend<sup>2</sup> ( $D_1$ ) by the spot stock price ( $P_0$ ) after the close of the market August 26, 2009, as reported by *MSN Money*.

---

<sup>2</sup> Value Line Summary & Index. 08-26-09

1 **Q. Why did Staff use the September 30, 2009, spot price rather than a historical average**  
2 **stock price to calculate the dividend yield component of the DCF formula?**

3 A. Current, rather than historic, market stock price is used in order to be consistent with  
4 finance theory, i.e., the efficient market hypothesis. The efficient market hypothesis  
5 asserts that the current stock price reflects all available information on a stock including  
6 investors' expectations of future returns. Use of a historical average of stock prices  
7 illogically discounts the most recent information in favor of less recent information. The  
8 latter is stale and is representative of underlying conditions that may have changed.

9  
10 **Q. How did Staff estimate the dividend growth (g) component of the constant-growth**  
11 **DCF model represented by Equation 2?**

12 A. The dividend growth component used by Staff is determined by the average of six  
13 different estimation methods as shown in Schedule JCM-8. Staff calculated historical and  
14 projected growth estimates on dividend-per-share ("DPS")<sup>3</sup>, earnings-per-share ("EPS")<sup>4</sup>  
15 and sustainable growth bases.

16  
17 **Q. Why did Staff examine EPS growth to estimate the dividend growth component of**  
18 **the constant-growth DCF model?**

19 A. Historic and projected EPS growth are used because dividends are related to earnings.  
20 Dividend distributions may exceed earnings in the short run but cannot continue  
21 indefinitely. In the long term, dividend distributions are dependent on earnings.

22  
23 **Q. How did Staff estimate historical DPS growth?**

24 A. Staff estimated historical DPS growth by calculating the average rate of growth in DPS of  
25 the sample water companies from 1998 to 2008. The results of that calculation are shown

---

<sup>3</sup> Derived from information provided by *Value Line*

<sup>4</sup> Derived from information provided by *Value Line*

1 in Schedule JCM-5. Staff calculated an average historical DPS growth rate of 3.1 percent  
2 for the sample water utilities for the aforementioned period.

3  
4 **Q. How did Staff estimate the projected DPS growth?**

5 A. Staff calculated an average of the projected DPS growth rates for the sample water utilities  
6 from *Value Line*. The average projected DPS growth rate is 4.3 percent as shown in  
7 Schedule JCM-5.

8  
9 **Q. How did Staff calculate the historical EPS growth rate?**

10 A. Staff estimated historical EPS growth by calculating the average rate of growth in EPS of  
11 the sample water companies from 1998 to 2008. Staff calculated an average historical  
12 EPS growth rate of 3.4 percent for the sample water utilities for the aforementioned period  
13 as shown in Schedule JCM-5.

14  
15 **Q. How did Staff estimate the projected EPS growth?**

16 A. Staff calculated an average of the projected EPS growth rates for the sample water utilities  
17 from *Value Line*. The average projected EPS growth rate is 9.7 percent as shown in  
18 Schedule JCM-5.

19  
20 **Q. How does Staff calculate its historical and projected sustainable growth rates?**

21 A. Historical and projected sustainable growth rates are calculated by adding their respective  
22 retention growth rate terms (br) to their respective stock financing growth rate terms (vs)  
23 as shown in Schedule JCM-6.

24

1 **Q. What is retention growth?**

2 A. Retention growth is the growth in dividends due to the retention of earnings. The  
3 retention growth concept is based on the theory that dividend growth cannot be achieved  
4 unless the company retains and reinvests some of its earnings. The retention growth is  
5 used in Staff's calculation of sustainable growth shown in Schedule JCM-6.

6  
7 **Q. What is the formula for the retention growth rate?**

8 A. The retention growth rate is the product of the retention ratio and the book/accounting  
9 return on equity. The retention growth rate formula is:

10 Equation 3:

$$\text{Retention Growth Rate} = br$$

where:  $b$  = the retention ratio (1 – dividend payout ratio)  
 $r$  = the accounting/book return on common equity

11

12 **Q. How did Staff calculate the average historical retention growth rate (br) for the**  
13 **sample water utilities?**

14 A. Staff calculated the historical retention rates by averaging the retention rates for the  
15 sample water companies from 1999 to 2008. The historical average retention (br) growth  
16 for the sample water utilities is 3.0 percent as shown in Schedule JCM-6.

17

18 **Q. How did Staff determine projected retention growth rate (br) for the sample water**  
19 **utilities?**

20 A. Staff used the retention growth projections for the sample water utilities for the period  
21 2012 to 2014 from *Value Line*. The projected average retention growth rate for the sample  
22 water utilities is 6.0 percent as shown in Schedule JCM-6.

1 **Q. When can retention growth provide a reasonable estimate of future dividend**  
2 **growth?**

3 A. The retention growth rate is a reasonable estimate of future dividend growth when the  
4 retention ratio is reasonably constant and the entity's market price to book value ("market-  
5 to-book ratio") is expected to be 1.0. The average retention ratio has been reasonably  
6 constant in recent years. However, the market-to-book ratio for the sample water utilities  
7 is 1.7, notably higher than 1.0, as shown in Schedule JCM-7.

8  
9 **Q. Is there any financial implication of a market-to-book ratio greater than 1.0?**

10 A. Yes. A market-to-book ratio greater than 1.0 implies that investors expect an entity to  
11 earn an accounting/book return on its equity that exceeds its cost of equity. The  
12 relationship between required returns and expected cash flows is readily observed in the  
13 fixed securities market. For example, assume an entity contemplating issuance of bonds  
14 with a face value of \$10 million at either 6 percent or 8 percent, and thus, paying annual  
15 interest of \$600,000 or \$800,000, respectively. Regardless of investors' required return on  
16 similar bonds, investors will be willing to pay more for the bonds if issued at 8 percent  
17 than if the bonds are issued at 6 percent. For example, if the current interest rate required  
18 by investors is 6 percent, then they would bid \$10 million for the 6 percent bonds and  
19 more than \$10 million for the 8 percent bonds. Similarly, if equity investors require a 9  
20 percent return and expect an entity to earn accounting/book returns of 13 percent, the  
21 market will bid up the price of the entity's stock to provide the required return of 9  
22 percent.

23

1 **Q. How has Staff generally recognized a market-to-book ratio exceeding 1.0 in its cost of**  
2 **equity analyses in recent years?**

3 A. Staff has assumed that investors expect the market-to-book ratio to remain greater than  
4 1.0. Given that assumption, Staff has added a stock financing growth rate (vs) term to the  
5 retention ratio (br) term to calculate its historical and projected sustainable growth rates.

6  
7 **Q. Do the historical and projected sustainable growth rates Staff uses to develop its**  
8 **DCF cost of equity in this case continue to include a stock financing growth rate**  
9 **term?**

10 A. Yes.

11  
12 **Q. What is stock financing growth?**

13 A. Stock financing growth is the growth in an entity's dividends due to the sale of stock by  
14 that entity. Stock financing growth is a concept derived by Myron Gordon and discussed  
15 in his book *The Cost of Capital to a Public Utility*.<sup>5</sup> Stock financing growth is the product  
16 of the fraction of the funds raised from the sale of stock that accrues to existing  
17 shareholders (v) and the fraction resulting from dividing the funds raised from the sale of  
18 stock by the existing common equity (s).

19  
20 **Q. What is the mathematical formula for the stock financing growth rate?**

21 A. The mathematical formula for stock financing growth is:

---

<sup>5</sup> Gordon, Myron J. *The Cost of Capital to a Public Utility*. MSU Public Utilities Studies, Michigan, 1974. pp 31-35.

Equation 4 :

$$\text{Stock Financing Growth} = vs$$

where :  $v$  = Fraction of the funds raised from the sale of stock that accrues to existing shareholders

$s$  = Funds raised from the sale of stock as a fraction of the existing common equity

1

2 **Q. How is the variable  $v$  presented above calculated?**

3 A. Variable  $v$  is calculated as follows:

4

Equation 5 :

$$v = 1 - \left( \frac{\text{book value}}{\text{market value}} \right)$$

5

6 For example, assume that a share of stock has a \$30 book value and is selling for \$45.

7

Then, to find the value of  $v$ , the formula is applied:

8

$$v = 1 - \left( \frac{30}{45} \right)$$

9

10 In this example,  $v$  is equal to 0.33.

11

12 **Q. How is the variable  $s$  presented above calculated?**

13 A. Variable  $s$  is calculated as follows:

14

15

1 Equation 6:

2 
$$s = \frac{\text{Funds raised from the issuance of stock}}{\text{Total existing common equity before the issuance}}$$

3

4

5 For example, assume that an entity has \$150 in existing equity, and it sells \$30 of stock.

6 Then, to find the value of  $s$ , the formula is applied:

7

$$s = \left( \frac{30}{150} \right)$$

8

9 In this example,  $s$  is equal to 20.0 percent.

10

11 **Q. What is the  $vs$  term when the market-to-book ratio is equal to 1.0?**

12 A. A market-to-book ratio equal to 1.0 reflects that investors expect an entity to earn a

13 book/accounting return on their equity investment equal to the cost of equity. When the

14 market-to-book ratio is equal to 1.0, none of the funds raised from the sale of stock by the

15 entity accrues to the benefit of existing shareholders, i.e., the term  $v$  is equal to zero (0.0).

16 Consequently, the  $vs$  term is also equal to zero (0.0). When stock financing growth is

17 zero, dividend growth depends solely on the  $br$  term.

18

19 **Q. What is the effect of the  $vs$  term when the market-to-book ratio is greater than 1.0?**

20 A. A market-to-book ratio greater than 1.0 reflects that investors expect an entity to earn a

21 book/accounting return on their equity investment greater than the cost of equity.

22 Equation 5 shows that when the market-to-book ratio is greater than 1.0 the  $v$  term is also

23 greater than zero. The excess by which new shares are issued and sold over book value

24 per share of outstanding stock is a contribution that accrues to existing stockholders in the

1 form of a higher book value. The resulting higher book value leads to higher expected  
2 earnings and dividends. Continued growth from the *vs* term is dependent upon the  
3 continued issuance and sale of additional shares at a price that exceeds book value per  
4 share.

5  
6 **Q. What *vs* estimate did Staff calculate from its analysis of the sample water utilities?**

7 A. Staff estimated an average stock financing growth of 2.0 percent for the sample water  
8 utilities as shown in Schedule JCM-6.

9  
10 **Q. What would occur if an entity had a market-to-book ratio greater than 1.0 as a result  
11 of investors expecting earnings to exceed the cost of equity capital and the entity  
12 subsequently experienced newly authorized rates equal to its cost of equity capital?**

13 A. Market pressure on the entity's stock price to reflect the change in future expected cash  
14 flows would cause the market-to-book ratio to move toward 1.0.

15  
16 **Q. Is inclusion of the *vs* term necessary if the average market-to-book ratio of the  
17 sample water utilities falls to 1.0 due to authorized ROEs equaling the cost of equity?**

18 A. No. As discussed above, when the market-to-book ratio is equal to 1.0, none of the funds  
19 raised from the sale of stock by the entity accrues to the benefit of existing shareholders  
20 because the *v* term equals to zero, and consequently, the *vs* term also equals zero. When  
21 the market-to-book ratio equals 1.0, dividend growth depends solely on the *br* term.  
22 Staff's inclusion of the *vs* term assumes that the market-to-book ratio continues to exceed  
23 1.0 and that the water utilities will continue to issue and sell stock at prices above book  
24 value with the effect of benefitting existing shareholders.

1 **Q. What are Staff's historical and projected sustainable growth rates?**

2 A. Staff's estimated historical sustainable growth rate is 5.1 percent based on an analysis of  
3 earnings retention for the sample water companies. Staff's projected sustainable growth  
4 rate is 9.0 percent based on retention growth projected by *Value Line*. Schedule JCM-6  
5 presents Staff's estimates of the sustainable growth rate.

6

7 **Q. What is Staff's expected infinite annual growth rate in dividends?**

8 A. Staff's expected infinite annual growth rate in dividends is 5.8 percent which is the  
9 average of historical and projected dividends per share ("DPS"), earnings per share  
10 ("EPS"), and sustainable growth estimates. Staff's calculation of the expected infinite  
11 annual growth rate in dividends is shown in Schedule JCM-8.

12

13 **Q. What is Staff's constant-growth DCF estimate for the sample utilities?**

14 A. Staff's constant-growth DCF estimate is 9.3 percent as shown in Schedule JCM-3.

15

16 *The Multi-Stage DCF*

17 **Q. Why did Staff implement the multi-stage DCF model to estimate LPSCO's cost of  
18 equity?**

19 A. Staff generally uses the multi-stage DCF model to consider the assumption that dividends  
20 may not grow at a constant rate. The multi-stage DCF uses two stages of growth. The  
21 first stage is four years followed by the second constant growth stage.

22

23 **Q. What is the mathematical formula for the multi-stage DCF?**

24 A. The multi-stage DCF formula is shown in the following equation:

Equation 7 :

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[ \frac{1}{(1+K)} \right]^n$$

Where :  $P_0$  = current stock price  
 $D_t$  = dividends expected during stage 1  
 $K$  = cost of equity  
 $n$  = years of non - constant growth  
 $D_n$  = dividend expected in year n  
 $g_n$  = constant rate of growth expected after year n

1

2 **Q. What steps did Staff take to implement its multi-stage DCF cost of equity model?**

3 A. First, Staff projected future dividends for each of the sample water utilities using near-  
4 term and long-term growth rates. Second, Staff calculated the rate (cost of equity) which  
5 equates the present value of the forecasted dividends to the current stock price for each of  
6 the sample water utilities. Lastly, Staff calculated an average of the individual sample  
7 company cost of equity estimates.

8

9 **Q. How did Staff calculate near-term (stage-1) growth?**

10 A. The stage-1 growth rate is based on *Value Lines*'s projected dividends for the next twelve  
11 months, when available, and on the average dividend growth rate (5.8 percent) calculated  
12 in Staff's constant DCF analysis for the remainder of the stage.

13

1 **Q. How did Staff estimate long-term (stage-2) growth?**

2 A. Staff calculated the stage-2 growth rate using the arithmetic mean rate of growth in GDP  
3 from 1929 to 2008.<sup>6</sup> Using the GDP growth rate assumes that the water utility industry is  
4 expected to grow at the same rate as the overall economy.

5  
6 **Q. What is the historical GDP growth rate that Staff used to estimate stage-2 growth?**

7 A. Staff used 6.7 percent to estimate the stage-2 growth rate.

8  
9 **Q. What is Staff's multi-stage DCF estimate for the sample utilities?**

10 A. Staff's multi-stage DCF estimate is 10.1 percent as shown in Schedule JCM-3.

11  
12 **Q. What is Staff's overall DCF estimate for the sample utilities?**

13 A. Staff's overall DCF estimate is 9.7 percent. Staff calculated the overall DCF estimate by  
14 averaging the constant growth DCF (9.3%) and multi-stage DCF (10.1%) estimates as  
15 shown in Schedule JCM-3.

16  
17 *Capital Asset Pricing Model*

18 **Q. Please describe the CAPM.**

19 A. The CAPM is used to determine the prices of securities in a competitive market. The  
20 CAPM model describes the relationship between a security's investment risk and its  
21 market rate of return. Under the CAPM an investor requires the expected return of a  
22 security to equal the rate on a risk-free security plus a risk premium. If the investor's  
23 expected return does not meet or beat the required return, the investment is not  
24 economically justified. The model also assumes that investors will sufficiently diversify

---

<sup>6</sup> www.bea.doc.gov

1 their investments to eliminate any non-systematic or unique risk.<sup>7</sup> In 1990, Professors  
2 Harry Markowitz, William Sharpe, and Merton Miller earned the Nobel Prize in  
3 Economic Sciences for their contribution to the development of the CAPM.  
4

5 **Q. Did Staff use the same sample water utilities in its CAPM and DCF cost of equity**  
6 **estimation analyses?**

7 A. Yes. Staff's CAPM cost of equity estimation analysis uses the same sample water  
8 companies as its DCF cost of equity estimation analysis.  
9

10 **Q. What is the mathematical formula for the CAPM?**

11 A. The mathematical formula for the CAPM is:  
12

Equation 8 :

$$K = R_f + \beta (R_m - R_f)$$

where:  $R_f$  = risk free rate  
 $R_m$  = return on market  
 $\beta$  = beta  
 $R_m - R_f$  = market risk premium  
 $K$  = expected return

13  
14 The equation shows that the expected return (K) on a risky asset is equal to the risk-free  
15 interest rate ( $R_f$ ) plus the product of the market risk premium ("Rp") ( $R_m - R_f$ ) multiplied  
16 by beta ( $\beta$ ) where beta represents the riskiness of the investment relative to the market.  
17

---

<sup>7</sup> The CAPM makes the following assumptions: 1) single holding period; 2) perfect and competitive securities market; 3) no transaction costs; 4) no restrictions on short selling or borrowing; 5) the existence of a risk-free rate; and 6) homogeneous expectations.

1 **Q. What is the risk free rate?**

2 A. The risk free rate is the rate of return of an investment with zero risk.

3

4 **Q. How does Staff estimate the risk-free rate of interest in its historical market risk**  
5 **premium CAPM method?**

6 A. Staff uses two calculations for estimates of the risk-free rate of interest. Staff uses the  
7 average of three (five-, seven-, and ten-year) intermediate-term U.S. Treasury securities'  
8 spot rates for its historical market risk premium CAPM cost of equity estimation, and the  
9 30-year U.S. Treasury bond spot rate for its current market risk premium CAPM cost of  
10 equity estimation. U.S. Treasuries are largely verifiable and readily available.

11

12 **Q. What does beta measure?**

13 A. Beta measures the volatility, or systematic risk, of a security relative to the market. Since  
14 systematic risk cannot be diversified away, it is the only risk that is relevant when  
15 estimating a security's required return. Using a baseline market beta of 1.0, a security  
16 with a beta less than 1.0 will be less volatile than the market. A security with a beta  
17 greater than 1.0 will be more volatile than the market.

18

19 **Q. How did Staff estimate LPSCO's beta?**

20 A. Staff used the average of the *Value Line* betas for the sample water utilities as a proxy for  
21 LPSCO's beta. Schedule JCM-7 shows the *Value Line* betas for each of the sample water  
22 utilities. The 0.82 average beta for the sample water utilities is Staff's estimated beta for  
23 LPSCO. A security with a 0.82 beta has less volatility than the market.

24

1 **Q. Please describe expected market risk premium ( $R_m - R_f$ )?**

2 A. The expected market risk premium is the expected return on the market above the risk free  
3 rate. Simplified, it is the return an investor expects as compensation for market risk.  
4

5 **Q. What did Staff use for the market risk premium?**

6 A. Staff uses two calculations for the market risk premium: 1) an historical market risk  
7 premium and 2) a current market risk premium.  
8

9 **Q. How did Staff calculate an estimate for the historical market risk premium?**

10 A. Staff uses the intermediate-term government bond income returns published in the  
11 Ibbotson Associates' *Stocks, Bonds, Bills, and Inflation 2008 Yearbook* to calculate the  
12 historical market risk premium. Ibbotson Associates calculates the historical risk  
13 premium by averaging the historical arithmetic differences between the S&P 500 and the  
14 intermediate-term government bond income returns for the period 1926-2008. Staff's  
15 historical market risk premium estimate is 6.9 percent as shown in Schedule JCM-3.  
16

17 **Q. How did Staff calculate an estimate for the current market risk premium?**

18 A. Staff solves equation 8 above to arrive at a market risk premium using a DCF derived  
19 expected return (K) of 13.68 (2.1 + 11.58<sup>8</sup>) percent using the expected dividend yield (2.1  
20 percent over the next twelve months) and the annual per share growth rate (11.58 percent)  
21 that *Value Line* projects for all dividend-paying stocks under its review<sup>9</sup> along with the  
22 current long-term risk-free rate (30-year Treasury note at 4.03 percent) and the market's  
23 average beta of 1.0. Staff calculated the current market risk premium as 9.65.<sup>10</sup>  
24

---

<sup>8</sup> The three to five year price appreciation is 55%.  $1.55^{0.25} - 1 = 11.58\%$

<sup>9</sup> October 2, 2009 issue date.

<sup>10</sup>  $13.68\% = 4.03\% + (1) (9.65\%)$

1 **Q. How are the historical market risk premium and current market risk premium**  
2 **estimates used?**

3 A. Each is used to calculate a CAPM cost of equity estimate, i.e., Staff calculated an  
4 historical market risk premium CAPM cost of equity estimate and a current market risk  
5 premium CAPM cost of equity estimate.

6  
7 **Q. What is the result of Staff's historical market risk premium CAPM and current**  
8 **market risk premium cost of equity estimations for the sample utilities?**

9 A. Staff's cost of equity estimates are 8.5 percent using the historical market risk premium  
10 CAPM and 11.9 using the current market risk premium CAPM.

11  
12 **Q. What is Staff's overall CAPM estimate for the sample utilities?**

13 A. Staff's overall CAPM cost of equity estimate is 10.2 percent which is the average of the  
14 historical market risk premium CAPM (8.5 percent) and the current market risk premium  
15 CAPM (11.9 percent) estimates as shown in Schedule JCM-3.

16  
17 **VI. SUMMARY OF STAFF'S COST OF EQUITY ANALYSIS**

18 **Q. What is the result of Staff's constant-growth DCF analysis to estimate of the cost of**  
19 **equity to the sample water utilities?**

20 A. Schedule JCM-3 shows the result of Staff's constant-growth DCF analysis. The result of  
21 Staff's constant-growth DCF analysis is as follows:

22  
23  $k = 3.5\% + 5.8\%$

24  
25  $k = 9.3\%$

1 Staff's constant-growth DCF estimate of the cost of equity to the sample water utilities is  
2 9.3 percent.

3  
4 **Q. What is the result of Staff's multi-stage DCF analysis to estimate of the cost of equity  
5 for the sample utilities?**

6 A. Schedule JCM-9 shows the result of Staff's multi-stage DCF analysis. The result of  
7 Staff's multi-stage DCF analysis is:

8	Company	Equity Cost
9		Estimate (k)
10	American States Water	9.4%
11	California Water	9.7%
12	Aqua America	9.8%
13	Connecticut Water	10.8%
14	Middlesex Water	11.5%
15	SJW Corp	<u>9.6%</u>
16		
17		
18	<b>Average</b>	<b>10.1%</b>

19  
20 Staff's multi-stage DCF estimate of the cost of equity for the sample water utilities is 10.1  
21 percent.

22  
23 **Q. What is Staff's overall DCF estimate of the cost of equity for the sample utilities?**

24 A. Staff's overall DCF estimate of the cost of equity for the sample utilities is 9.7 percent.  
25 Staff's overall DCF estimate was calculated by averaging Staff's constant growth DCF  
26 and Staff's multi-stage DCF estimates as shown in Schedule JCM-3.

27

1 **Q. What is the result of Staff's historical market risk premium CAPM analysis to**  
2 **estimate of the cost of equity for the sample utilities?**

3 A. Schedule JCM-3 shows the result of Staff's CAPM analysis using the historical risk  
4 premium estimate. The result is as follows:

5 
$$k = 2.9\% + 0.82 * 6.9\%$$

6 
$$k = 8.5\%$$

7  
8  
9 Staff's CAPM estimate (using the historical market risk premium) of the cost of equity to  
10 the sample water utilities is 8.5 percent.

11  
12 **Q. What is the result of Staff's current market risk premium CAPM analysis to**  
13 **estimate the cost of equity for the sample utilities?**

14 A. Schedule JCM-3 shows the result of Staff's CAPM Analysis using the current market risk  
15 premium estimate. The result is:

16 
$$k = 4.0\% + 0.82 * 9.6\%$$

17 
$$k = 11.9\%$$

18  
19 Staff's CAPM estimate (using the current market risk premium) of the cost of equity to the  
20 sample water utilities is 11.9 percent.

21  
22 **Q. What is Staff's overall CAPM estimate of the cost of equity for the sample utilities?**

23 A. Staff's overall CAPM estimate for the sample utilities is 10.2 percent. Staff's overall  
24 CAPM estimate is the average of the historical market risk premium CAPM (8.5 percent)  
25 and the current market risk premium CAPM (11.9 percent) estimates as shown in  
26 Schedule JCM-3.

1 **Q. Please summarize the results of Staff's cost of equity analysis for the sample utilities.**

2 A. The following table shows the results of Staff's cost of equity analysis:

3  
4 **Table 2**

<b>Method</b>	<b>Estimate</b>
Average DCF Estimate	9.7%
Average CAPM Estimate	10.2%
<b>Overall Average</b>	<b>10.0%</b>

5  
6 Staff's average estimate of the cost of equity to the sample water utilities is 10.0 percent.

7  
8 **VII. FINAL COST OF EQUITY ESTIMATES FOR LPSCO**

9 **Q. Please compare LPSCO's capital structure to that of the six sample water companies.**

10 A. The average capital structure for the sample water utilities is composed of 49.2 percent  
11 equity and 50.8 percent debt, as shown in Staff Schedule JCM-4. LPSCO's actual capital  
12 structure is composed of 82.8 percent equity and 17.2 percent debt. In this case, since  
13 LPSCO's capital structure is less leveraged than that of the average sample water utilities'  
14 capital structure, its stockholders bear less financial risk than the sample water utilities.  
15 Accordingly, LPSCO's cost of equity is lower than the sample water utilities.

16  
17 **Q. What method does Staff use to calculate the effect on the cost of equity capital of the**  
18 **different financial risks posed by LPSCO versus the sample companies?**

19 A. Staff uses the methodology developed by Professor Robert Hamada of the University of  
20 Chicago, which incorporates capital structure theory with the CAPM, to estimate the  
21 effect of LPSCO's capital structure on its cost of equity. Staff calculated a financial risk  
22 adjustment for LPSCO of negative 80 basis points (0.8 percent) based on the Company's  
23 actual capital structure of 82.8 percent equity and 17.2 percent debt in order to reflect the

1 Company's actual financial risk. LPSCO's cost of equity adjusted for financial risk (9.2  
2 percent) can be determined by subtracting this 0.8 percent financial risk adjustment from  
3 Staff's average estimate of the cost of equity to the sample water utilities (10.0 percent).  
4

5 **Q. Does Staff's 80 basis point downward financial risk adjustment to the cost of equity**  
6 **reflect the full downward measure to the cost of equity due to difference in financial**  
7 **risk in LPSCO's capital structure compared to the sample water utilities?**

8 A. No. Staff calculated its recommended 80 basis point downward financial risk adjustment  
9 assuming that the sample companies had a capital structure comprised of 60 percent equity  
10 and 40 percent debt instead of the actual average capital structure for the sample  
11 companies and assuming that the Company's capital structure is composed of 82.8 percent  
12 equity and 17.2 percent debt. The calculated downward financial risk adjustment would  
13 have been greater than 80 basis points if measured using 82.8 percent equity for the  
14 Company's capital structure and the sample companies' actual average equity of 49.2  
15 percent. Staff measured the financial risk adjustment assuming the 60 percent equity for  
16 the sample companies to recognize that a capital structure composed of 60 percent equity  
17 and 40 percent debt is reasonable even though it is less leveraged than that of the sample  
18 companies and to encourage the Company to maintain a healthy capital structure.  
19

20 **Q. What is Staff's ROE estimate for LPSCO?**

21 A. Staff determined an ROE estimate of 10.0 percent for the Applicant based on cost of  
22 equity estimates for the sample companies ranging from 9.7 percent for the CAPM to 10.2  
23 percent for the DCF. Staff recommends adoption of an 80 basis point downward financial  
24 risk adjustment to 9.2 percent.  
25

1 **VIII. RATE OF RETURN RECOMMENDATION**

2 **Q. What overall rate of return did Staff determine for LPSCO?**

3 A. Staff determined a 8.7 percent ROR for the Applicant as shown in Schedule JCM-1 and  
4 the following table:

5  
6 **Table 3**

7

	<b>Weight</b>	<b>Cost</b>	<b>Weighted Cost</b>
Long-term Debt	17.2%	6.4%	1.1%
Common Equity	82.8%	9.2%	<u>7.6%</u>
<b>Overall ROR</b>			<b><u>8.7%</u></b>

8

9 **IX. STAFF RESPONSE TO APPLICANT'S COST OF CAPITAL WITNESS MR.**  
10 **THOMAS J. BOURASSA**

11 **Q. Please summarize Mr. Bourassa's analyses and recommendations.**

12 A. Mr. Bourassa recommends a 12.5 percent ROE based on analyses for single and multi-  
13 stage DCF models, as well as historical and current market risk premium CAPM for the  
14 same sample of water companies selected by Staff. Mr. Bourassa also asserts that LPSCO  
15 faces additional risks not captured by the market models, such as regulatory and financial  
16 risk, and he concludes that 12.5 percent ROE presents a reasonable balance resulting from  
17 his analyses. Mr. Bourassa also proposes 11.02 percent for the overall ROR with a capital  
18 structure consisting of 82.5 percent equity and 17.5 percent debt.

19

1 *Constant-Growth DCF*

2 **Q. Does Staff have any comments on Mr. Bourassa's sole reliance on analysts' forecasts**  
3 **to estimate DPS growth in his constant growth DCF estimates?**

4 A. Yes. Generally, analysts' forecasts are known to be overly optimistic. Sole use of  
5 analysts' forecasts to calculate the growth in dividends (g), causes inflated growth, and  
6 consequently, inflated cost of equity estimates. Also, relying only on analysts' forecasts  
7 of earnings growth to forecast DPS is inappropriate because it assumes that investors do  
8 not look at other relevant information such as past dividend and earnings growth.

9  
10 **Q. Does Staff have any comments on the study cited by Mr. Bourassa, conducted by**  
11 **David A. Gordon, Myron J. Gordon and Lawrence I. Gould<sup>11</sup> that he asserts support**  
12 **exclusive use of analysts' forecasts in the DCF model?**

13 A. Yes. The article cited by Mr. Bourassa does not conclude that investors ignore past  
14 growth when pricing stocks. Instead, the article describes more generally that methods  
15 exclusively using analysts' forecasts are "popular or attractive models" but does not  
16 support the conclusion that these forecasts should be used alone.

17  
18 **Q. Does Professor Gordon recommend relying exclusively on analysts' forecasts as the**  
19 **measure of growth in the DCF model?**

20 A. No. Subsequent to the study cited by Mr. Bourassa,<sup>12</sup> Professor Gordon provided the  
21 keynote address at the 30<sup>th</sup> Financial Forum of the Society of Utility and Regulatory  
22 Financial Analysts, in which he stated:

23  

---

<sup>11</sup> Gordon, David A., Myron J. Gordon, Lawrence I. Gould. "Choice Among Methods of Estimating Share Yield." *The Journal of Portfolio Management*. Spring 1989. pp. 50-55. (Bourassa's direct testimony, page 36, footnote.)

<sup>12</sup> Ibid.

1            *I understand that companies coming before regulatory agencies liked and*  
2            *advocated the high growth rates in security analyst forecasts for arriving*  
3            *at their cost of equity capital. Instead of rejecting these forecasts, I*  
4            *understand that FERC and other regulatory agencies have decided to*  
5            *compromise with them. In particular, in arriving at the cost of equity for*  
6            *company X, the FERC has decided to arrive at the growth rate in my*  
7            *dividend growth model by using an average of two growth rates. One is*  
8            *security analysts forecast of the short-term growth rate in earnings*  
9            *provided by IBES or Value Line and the other a more long run and*  
10           *typically lower figure such as the past growth in GNP.*

11           *Such an average can be questioned on various grounds. However, my*  
12           *judgment is that between the short-term forecast alone and its average*  
13           *with the past growth rate in GNP, the latter may be a more reasonable*  
14           *figure.*<sup>13</sup> (Emphasis added)

15  
16           Simply stated, Professor Gordon would temper the typically higher analysts' forecasts  
17           with the typically lower GNP growth rate by averaging the two.

18  
19           **Q. How does Staff respond to Mr. Bourassa's statement, "Logically, in estimating future**  
20           **growth, financial institutions and analysts have taken into account all relevant**  
21           **historical information on a company as well as other more recent information. To**  
22           **the extent that past results provide useful indications of future growth prospects,**  
23           **analysts' forecasts would already incorporate that information.?" (Bourassa's Direct**  
24           **Testimony, Page 28, line 2-6)**

25           **A.** The appropriate growth rate to use in the DCF formula is the dividend growth rate  
26           expected by *investors*, not analysts. Therefore, while analysts may have considered  
27           historical measures of growth, it is reasonable to assume that investors rely to some extent  
28           on past growth as well. This calls for consideration of both analysts' forecasts as well as  
29           past growth.

---

<sup>13</sup> Gordon, M. J. Keynote Address at the 30<sup>th</sup> Financial Forum of the Society of Utility and Regulatory Financial Analysts. May 8, 1998. Transparency 3.

1 **Q. Does Staff have any other evidence to support its assertion that exclusive reliance on**  
2 **analysts' forecasts of earnings growth in the DCF model would result in inflated cost**  
3 **of equity estimates?**

4 A. Yes. Experts in the financial community have commented on the optimism in analysts'  
5 forecasts of future earnings.<sup>14</sup> A study cited by David Dreman in his book *Contrarian*  
6 *Investment Strategies: The Next Generation* found that *Value Line* analysts were  
7 optimistic in their forecasts by 9 percent annually, on average for the 1987 – 1989 period.  
8 Another study conducted by David Dreman found that between 1982 and 1997, analysts  
9 overestimated the growth of earnings of companies in the S&P 500 by 188 percent.

10 Also, Burton Malkiel of Princeton University studied the one-year and five-year earnings  
11 forecasts made by some of the most respected names in the investment business. His  
12 results showed that the five-year estimates of professional analysts, when compared with  
13 actual earnings growth rates, were much worse than the predictions from several naïve  
14 forecasting models, such as the long-run rate of growth of national income. In the  
15 following excerpt from Professor Malkiel's book *A Random Walk Down Wall Street*, he  
16 discusses the results of his study:

17 *When confronted with the poor record of their five-year growth estimates,*  
18 *the security analysts honestly, if sheepishly, admitted that five years*  
19 *ahead is really too far in advance to make reliable projections. They*  
20 *protested that although long-term projections are admittedly important,*  
21 *they really ought to be judged on their ability to project earnings changes*  
22 *one year ahead. Believe it or not, it turned out that their one-year*  
23 *forecasts were even worse than their five-year projections.*

24 *The analysts fought back gamely. They complained that it was unfair to*  
25 *judge their performance on a wide cross section of industries, because*  
26 *earnings for high-tech firms and various "cyclical" companies are*

---

<sup>14</sup> See Seigel, Jeremy J. *Stocks for the Long Run*. 2002. McGraw-Hill. New York. p. 100. Dreman, David. *Contrarian Investment Strategies: The Next Generation*. 1998. Simon & Schuster. New York. pp. 97-98. Malkiel, Burton G. *A Random Walk Down Wall Street*. 2003. W.W. Norton & Co. New York. p. 175. Testimony of Professors Myron J. Gordon and Lawrence I. Gould, consultant to the Trial Staff (Common Carrier Bureau), FCC Docket 79-63, p. 95.

1                    *notoriously hard to forecast. "Try us on utilities," one analyst*  
2                    *confidently asserted. At the time they were considered among the most*  
3                    *stable group of companies because of government regulation. So we*  
4                    *tried it and they didn't like it. Even the forecasts for the stable utilities*  
5                    *were far off the mark.*<sup>15</sup> (Emphasis added)

6  
7     **Q. Are investors aware of the problems related to analysts' forecasts?**

8     A. Yes. In addition to books, there are numerous published articles appearing in *The Wall*  
9     *Street Journal* and other financial publications that cast doubt as to how accurate research  
10     analysts are in their forecasts.<sup>16</sup> Investors, being keenly aware of these inherent biases in  
11     forecasts, will use other methods to assess future growth.

12  
13     **Q. Should DPS growth be considered in a DCF analysis?**

14     A. Yes. As previously stated on section V of this testimony, the current market price of a  
15     stock is equal to the present value of all expected future dividends, not future earnings.  
16     Professor Jeremy Siegel from the Wharton School of Finance stated:

17  
18                    *Note that the price of the stock is always equal to the present value of all*  
19                    *future dividends and not the present value of future earnings. Earnings*  
20                    *not paid to investors can have value only if they are paid as dividends or*  
21                    *other cash disbursements at a later date. Valuing stock as the present*  
22                    *discounted value of future earnings is manifestly wrong and greatly*  
23                    *overstates the value of the firm.*<sup>17</sup>

24  
25     In other words, investors pay attention to earnings as long as they are paid as dividends.  
26     Earnings can easily be overstated. If investors do not receive dividends or other cash  
27     disbursement at a later date, then such earnings are meaningless.

<sup>15</sup> Malkiel, Burton G. *A Random Walk Down Wall Street*. 2003. W.W. Norton & Co. New York. p. 175

<sup>16</sup> See Smith, Randall & Craig, Suzanne. "Big Firms Had Research Ploy: Quiet Payments Among Rivals." *The Wall Street Journal*. April 30, 2003. Brown, Ken. "Analysts: Still Coming Up Rosy." *The Wall Street Journal*. January 27, 2003. p. C1. Karmin, Craig. "Profit Forecasts Become Anybody's Guess." *The Wall Street Journal*. January 21, 2003. p. C1. Gasparino, Charles. "Merrill Lynch Investigation Widens." *The Wall Street Journal*. April 11, 2002. p. C4. Elstein, Aaron. "Earnings Estimates Are All Over the Map." *The Wall Street Journal*. August 2, 2001. p. C1. Dreman, David. "Don't Count on those Earnings Forecasts." *Forbes*. January 26, 1998. p. 110.

<sup>17</sup> Siegel, Jeremy J. *Stocks for the Long Run*. 2002. McGraw-Hill. New York. P. 93.

1 *Multi-Stage DCF*

2 **Q. Does Staff have any comments on Mr. Bourassa's sole reliance on forecasted**  
3 **earnings growth for the near-term ("Stage -1 growth") in his multi-stage DCF?**

4 A. Yes. As previously discussed, exclusive reliance on forecasted earnings growth for the  
5 near-term (Stage-1 growth) is inappropriate since analysts forecasts of earnings growth are  
6 known to be overly optimistic. Reliance on forecasted earnings growth, to the exclusion  
7 of historic EPS and historical and projected DPS, likely results in inflated cost of equity  
8 estimates.

9  
10 *Firm-Specific Risk*

11 **Q. What is Staff's response to Mr. Bourassa's contention that the market data provided**  
12 **by the sample water utilities does not capture all of the market risk associated with**  
13 **LPSCO due to Arizona regulatory requirements use of historical test years and**  
14 **limited out of period adjustment recognition?<sup>18</sup>**

15 A. The examples cited by Mr. Bourassa are examples of firm-specific or unique risks.  
16 Existence of firm-specific risk does not necessarily indicate that a company has more total  
17 risk than others as all companies have firm-specific risks. Moreover, as previously  
18 discussed, the market does not compensate investors for firm-specific risk because it can  
19 be eliminated through diversification.

20  

---

<sup>18</sup> Direct Testimony of Thomas J. Bourassa, LPSCO Sewer Corporation, Docket No. SW-01428A-09-0103 & W-01427A-09-0104, page 18 lines 16-17

1 **Q. Does Staff have a response to Mr. Bourassa's assertion that LPSCO is not**  
2 **comparable to the six publicly traded water utilities in the sample group due to a**  
3 **difference in size?<sup>19</sup>**

4 A. The Commission has previously ruled that firm size does not warrant recognition of a risk  
5 premium. In Decision No. 64282, dated December 28, 2001, for Arizona Water, the  
6 Commission stated "We do not agree with the Company's proposal to assign a risk  
7 premium to Arizona Water based on its size relative to other publicly traded water  
8 utilities..." In Decision No. 64727, dated April 17, 2002, for Black Mountain Gas, the  
9 Commission agreed with Staff that "the 'firm size phenomenon' does not exist for  
10 regulated utilities, and that therefore there is no need to adjust for risk for small firm size  
11 in utility rate regulation."

12  
13 **X. CONCLUSION**

14 **Q. Please summarize Staff's recommendations.**

15 A. Staff recommends that the Commission adopt a capital structure for LPSCO in this  
16 proceeding composed of 17.2 percent debt and 82.8 percent equity.

17  
18 Staff also recommends that the Commission adopt an 8.7 percent ROR for the Applicant,  
19 based on Staff's cost of equity estimates that range from 9.7 percent to 10.2 percent for the  
20 sample companies and to reflect an 80 basis point downward financial risk adjustment.

21  
22 **Q. Does this conclude your Direct Testimony?**

23 A. Yes, it does.

---

<sup>19</sup> Direct Testimony of Thomas J. Bourassa, LPSCO Sewer Corporation, Docket No. SW-01428A-09-0103 & W-01427A-09-0104, page 21 lines 11-13

**Litchfield Park Service Company Cost of Capital Calculation**  
**Capital Structure**  
**And Weighted Average Cost of Capital**  
**Staff Recommended and Company Proposed**

[A]	[B]	[C]	[D]
<u>Description</u>	<u>Weight (%)</u>	<u>Cost</u>	<u>Weighted Cost</u>
Staff Recommended Structure			
Debt	17.2%	6.4%	1.1%
Common Equity	82.8%	9.2%	7.6%
Weighted Average Cost of Capital			<b>8.7%</b>
Company Proposed Structure			
Debt	17.5%	6.4%	1.1%
Common Equity	82.5%	12.5%	10.3%
Weighted Average Cost of Capital			<b>11.4%</b>

[D] : [B] x [C]  
Supporting Schedules: JCM-3 and JCM-4.

SW-01428A-09-0103  
W-01427-A-09-0104

Schedule JCM-2

Intentionally left blank

Litchfield Park Service Company Cost of Capital Calculation  
Final Cost of Equity Estimates  
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]
<b>DCF Method</b>		$D/P_o^1$	$+ g^2$	$= k$
Constant Growth DCF Estimate		3.5%	+ 5.8%	= 9.3%
Multi-Stage DCF Estimate				= 10.1%
<b>Average of DCF Estimates</b>				<b>9.7%</b>
<b>CAPM Method</b>	$R_f$	$\beta^5$	$\times (Rp)$	$= k$
Historical Market Risk Premium <sup>3</sup>	2.9%	0.82	$\times 6.9\%$ <sup>6</sup>	= 8.5%
Current Market Risk Premium <sup>4</sup>	4.0%	0.82	$\times 9.6\%$ <sup>7</sup>	= 11.9%
<b>Average of CAPM Estimates</b>				<b>10.2%</b>
			<b>Average</b>	<b>10.0%</b>
			Financial risk adjustment	<b>-0.8%</b>
			<b>Total</b>	<b>9.2%</b>

1 MSN Money and Value Line

2 Schedule JCM-8

3 Risk-free rate (Rf) for 5, 7, and 10 year Treasury rates from the U.S. Treasury Department at [www.ustreas.gov](http://www.ustreas.gov)

4 Risk-free rate (Rf) for 30 Year Treasury bond rate from the U.S. Treasury Department at [www.ustreas.gov](http://www.ustreas.gov)

5 Value Line

6 Historical Market Risk Premium (Rp) calculated from Ibbotson Associates SBBI 2009 Yearbook data

7 Testimony

Litchfield Park Service Company Cost of Capital Calculation  
 Average Capital Structure of Sample Water Utilities

[A]	[B]	[C]	[D]
<u>Company</u>	<u>Debt</u>	<u>Common Equity</u>	<u>Total</u>
American States Water	53.3%	46.7%	100.0%
California Water	44.7%	55.3%	100.0%
Aqua America	54.9%	45.1%	100.0%
Connecticut Water	50.6%	49.4%	100.0%
Middlesex Water	52.7%	47.3%	100.0%
SJW Corp	<u>48.4%</u>	<u>51.6%</u>	<u>100.0%</u>
Average Sample Water Utilities	<b>50.8%</b>	<b>49.2%</b>	<b>100.0%</b>
LPSCO - Actual Capital Structure	<b>17.2%</b>	<b>82.8%</b>	<b>100.0%</b>

Source:  
 Sample Water Companies from Value Line

Litchfield Park Service Company Cost of Capital Calculation  
Growth in Earnings and Dividends  
Sample Water Utilities

[A] Company	[B] Dividends Per Share 1998 to 2008 <u>DPS<sup>1</sup></u>	[C] Dividends Per Share Projected <u>DPS<sup>1</sup></u>	[D] Earnings Per Share 1998 to 2008 <u>EPS<sup>1</sup></u>	[E] Earnings Per Share Projected <u>EPS<sup>1</sup></u>
American States Water	1.8%	5.1%	3.7%	10.9%
California Water	0.9%	2.8%	2.7%	6.9%
Aqua America	7.0%	5.0%	6.2%	11.4%
Connecticut Water	1.3%	No Projection	1.0%	No Projection
Middlesex Water	2.1%	No Projection	2.9%	No Projection
SJW Corp	5.5%	No Projection	3.0%	No Projection
Average Sample Water Utilities	3.1%	4.3%	3.4%	9.7%

<sup>1</sup> Value Line

Litchfield Park Service Company Cost of Capital Calculation  
Sustainable Growth  
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]
Company	Retention Growth 1999 to 2008 br	Retention Growth Projected br	Stock Financing Growth vs	Sustainable Growth 1999 to 2008 br + vs	Sustainable Growth Projected br + vs
American States Water	3.0%	6.3%	1.4%	4.5%	7.7%
California Water	2.0%	6.1%	4.1%	6.1%	10.2%
Aqua America	4.8%	5.7%	3.5%	8.3%	9.2%
Connecticut Water	2.6%	No Projection	0.8%	3.4%	No Projection
Middlesex Water	1.4%	No Projection	2.2%	3.6%	No Projection
SJW Corp	4.5%	No Projection	0.1%	4.6%	No Projection
Average Sample Water Utilities	3.0%	6.0%	2.0%	5.1%	9.0%

[B]: Value Line  
[C]: Value Line  
[D]: Value Line and MSN Money  
[E]: [B]+[D]  
[F]: [C]+[D]

Litchfield Park Service Company Cost of Capital Calculation  
Selected Financial Data of Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]	[G]
Company	Symbol	Spot Price 9/30/2009	Book Value	Mkt To Book	Value Line Beta $\beta$	Raw Beta $\beta_{raw}$
American States Water	AWR	<b>36.18</b>	18.59	1.9	<b>0.80</b>	0.67
California Water	CWT	<b>38.94</b>	21.01	1.9	<b>0.80</b>	0.67
Aqua America	WTR	<b>17.64</b>	9.18	1.9	<b>0.65</b>	0.45
Connecticut Water	CTWS	<b>22.39</b>	12.61	1.8	<b>0.85</b>	0.75
Middlesex Water	MSEX	<b>15.08</b>	10.88	1.4	<b>0.80</b>	0.67
SJW Corp	SJW	<b>22.85</b>	14.68	<u>1.6</u>	<u>1.00</u>	<u>0.97</u>
Average				<b>1.7</b>	<b>0.82</b>	<b>0.70</b>

[C]: Msn Money

[D]: Value Line

[E]: [C] / [D]

[F]: Value Line

[G]: (-0.35 + [F]) / 0.67

Litchfield Park Service Company Cost of Capital Calculation  
Calculation of Expected Infinite Annual Growth in Dividends  
Sample Water Utilities

[A]	[B]
<u>Description</u>	g
DPS Growth - Historical <sup>1</sup>	3.1%
DPS Growth - Projected <sup>1</sup>	4.3%
EPS Growth - Historical <sup>1</sup>	3.4%
EPS Growth - Projected <sup>1</sup>	9.7%
Sustainable Growth - Historical <sup>2</sup>	5.1%
<u>Sustainable Growth - Projected<sup>2</sup></u>	<u>9.0%</u>
Average	<b>5.8%</b>

<sup>1</sup> Schedule JCM-5

<sup>2</sup> Schedule JCM-5

Litchfield Park Service Company Cost of Capital Calculation  
Multi-Stage DCF Estimates  
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]	[H]	[I]
Company	Current Mkt. Price (P <sub>0</sub> ) <sup>1</sup> 9/30/2009	Projected Dividends <sup>2</sup> (Stage 1 growth) (D <sub>t</sub> )				Stage 2 growth <sup>3</sup> (g <sub>n</sub> )	Equity Cost Estimate (K) <sup>4</sup>
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>		
American States Water	36.2	1.01	1.07	1.13	1.20	6.7%	9.4%
California Water	38.9	1.21	1.28	1.36	1.44	6.7%	9.7%
Aqua America	17.6	0.56	0.60	0.63	0.67	6.7%	9.8%
Connecticut Water	22.4	0.94	1.00	1.05	1.11	6.7%	10.8%
Middlesex Water	15.1	0.74	0.78	0.83	0.88	6.7%	11.5%
SJW Corp	22.9	0.68	0.72	0.76	0.80	6.7%	9.6%

Average 10.1%

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[ \frac{1}{(1+K)} \right]^n$$

Where : P<sub>0</sub> = current stock price

D<sub>t</sub> = dividends expected during stage 1

K = cost of equity

n = years of non - constant growth

D<sub>n</sub> = dividend expected in year n

g<sub>n</sub> = constant rate of growth expected after year n

1 [B] see Schedule JCM-7

2 Derived from Value Line Information

3 Average annual growth in GDP 1929 - 2008 in current dollars.

4 Internal Rate of Return of Projected Dividends

BEFORE THE ARIZONA CORPORATION COMMISSION

KRISTIN K. MAYES

Chairman

GARY PIERCE

Commissioner

PAUL NEWMAN

Commissioner

SANDRA D. KENNEDY

Commissioner

BOB STUMP

Commissioner

IN THE MATTER OF THE APPLICATION OF )  
LITCHFIELD PARK SERVICE COMPANY, 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-01428A-09-0103

IN THE MATTER OF THE APPLICATION OF )  
LITCHFIELD PARK SERVICE COMPANY, AN )  
ARIZONA CORPORATION, FOR A )  
DETERMINATION OF THE FAIR VALUE OF ITS )  
UTILITY PLANTS AND PROPERTY AND FOR )  
INCREASES IN ITS WATER RATES AND )  
CHARGES FOR UTILITY SERVICE BASED )  
THEREON. )

DOCKET NO. W-01427A-09-0104

DIRECT TESTIMONY

OF

MARLIN SCOTT, JR

UTILITIES ENGINEER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

NOVEMBER 4, 2009

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EXHIBIT MSJ, Engineering Report for Wastewater Division

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**EXECUTIVE SUMMARY  
LITCHFIELD PARK SERVICE COMPANY  
DOCKET NOS. W-01427A-09-0104 AND SW-01428A-09-0103**

**WATER DIVISION**

**Conclusions**

- A. The Litchfield Park Service Company's ("Company") water system has a water loss of 9.3 percent which is within the acceptable limit of 10 percent.
- B. The water system's current source and storage capacity are adequate to serve the present customer base and reasonable growth.
- C. Maricopa County Environmental Services Department has reported the Company's water system has no major deficiencies and determined that this system is currently delivering water that meets water quality standards required by the Arizona Administrative Code, Title 18, Chapter 4.
- D. The Company is located in the Arizona Department of Water Resources' Phoenix Active Management Area and reported the Company's system is in compliance with its requirements governing water providers and/or community water systems.
- E. According to the Utilities Division Compliance Section, the Company had no delinquent Arizona Corporation Commission ("ACC") compliance issues.
- F. Staff concludes that the requested Post-Test Year plant, adjusted to \$1,885,770, is used and useful for provision of service to the customers.
- G. The Company has an approved curtailment tariff that became effective on December 9, 2002.
- H. The Company has an approved backflow prevention tariff that became effective on January 20, 1998.

**Recommendations**

- 1. Staff recommends that the Company's reported annual water testing expense of \$28,365 be adopted for this proceeding.
- 2. Staff recommends the removal of the Litchfield Greens Booster Station at a cost of \$78,879 from the plant-in-service because this booster station is not used and useful.

3. Staff recommends that the Company continue to use the Staff's recommended water depreciation rates by individual National Association of Regulatory Utility Commissioners ("NARUC") category as shown in Water Division Table J-1.
4. Staff recommends approval of the proposed charges as shown in Water Division's Table K-1, with separate installation charges for the service line and meter installations.
5. The Company requested a Water Hook-Up Fee ("HUF") Tariff starting at \$1,800 for a 5/8 x 3/4-inch meter. Staff supports the concept of a HUF and recommends the adoption of the specific and updated tariff language contained in Attachment - Water HUF Tariff.

## **WASTEWATER DIVISION**

### **Conclusions**

- A. The Company's Palm Valley Water Reclamation Facilities have adequate treatment capacity to serve the present customer base and reasonable growth.
- B. The Arizona Department of Environmental Quality ("ADEQ") has reported the Company has no deficiencies and in compliance with ADEQ regulations.
- C. According to the Utilities Division Compliance Section, the Company had no delinquent ACC compliance issues.

### **Recommendations**

1. Staff recommends the removal of the three lift stations, totaling to \$554,977, from the plant-in-service because these booster stations are not used and useful.
2. Staff recommends that the Company continue to use the Staff's recommended wastewater depreciation rates by individual NARUC category as shown in Wastewater Division Table H-1.
3. The Company has an existing Wastewater HUF Tariff that became effective on April 1, 2008. The Company requested to modify its Wastewater HUF Tariff to start at \$1,800 per Equivalent Residential Unit. Staff supports the concept of a HUF and recommends the adoption of the specific and updated tariff language contained in Attachment - Wastewater HUF Tariff.

1     **INTRODUCTION**

2     **Q.     Please state your name, place of employment and job title.**

3     A.     My name is Marlin Scott, Jr. My place of employment is the Arizona Corporation  
4           Commission (“Commission” or “ACC”), Utilities Division, 1200 West Washington Street,  
5           Phoenix, Arizona 85007. My job title is Utilities Engineer.

6  
7     **Q.     How long have you been employed by the Commission?**

8     A.     I have been employed by the Commission since November 1987.

9  
10    **Q.     Please list your duties and responsibilities.**

11    A.     As a Utilities Engineer, specializing in water and wastewater engineering, my  
12           responsibilities include: the inspection, investigation, and evaluation of water and  
13           wastewater systems; preparing reconstruction cost new and/or original cost studies, cost of  
14           service studies and investigative reports; providing technical recommendations and  
15           suggesting corrective action for water and wastewater systems; and providing written and  
16           oral testimony on rate applications and other cases before the Commission.

17  
18    **Q.     How many cases have you analyzed for the Utilities Division?**

19    A.     I have analyzed approximately 530 cases covering various responsibilities for the Utilities  
20           Division.

21  
22    **Q.     Have you previously testified before this Commission?**

23    A.     Yes, I have testified in 77 proceedings before this Commission.

1 **Q. What is your educational background?**

2 A. I graduated from Northern Arizona University in 1984 with a Bachelor of Science degree  
3 in Civil Engineering Technology.

4  
5 **Q. Briefly describe your pertinent work experience.**

6 A. Prior to my employment with the Commission, I was Assistant Engineer for the City of  
7 Winslow, Arizona, for about two years. Prior to that, I was a Civil Engineering  
8 Technician with the U.S. Public Health Service in Winslow for approximately six years.

9  
10 **Q. Please state your professional membership, registrations, and licenses.**

11 A. I am a member of the National Association of Regulatory Utility Commissioners' Staff  
12 Subcommittee on Water.

13  
14 **PURPOSE OF TESTIMONY**

15 **Q. Were you assigned to provide the Utilities Division Staff ("Staff") engineering  
16 analysis and recommendation for the Litchfield Park Service Company  
17 ("Company") in this proceeding?**

18 A. Yes. I reviewed the Company's application, reviewed responses to data requests, and  
19 inspected the water and wastewater systems on August 28, 2009 and September 2, 2009,  
20 respectively. This testimony and its attachment present Staff's engineering evaluation.

21  
22 **ENGINEERING REPORT**

23 **Q. Please describe the attached Engineering Report, Exhibit MSJ.**

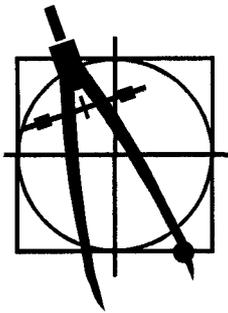
24 A. Exhibit MSJ presents the details and analyses of Staff's findings for the water and  
25 wastewater divisions, and is attached to this Direct Testimony. Exhibit MSJ contains the  
26 following water division major topics: (1) a description of the water system, (2) water

1 use, (3) growth, (4) compliance with the rules of the Maricopa County Environmental  
2 Services Department, Arizona Department of Water Resources, and the Arizona  
3 Corporation Commission ("ACC"), (5) plant-in-service adjustments, (6) depreciation  
4 rates, (7) service line and meter installation charges, and (8) tariff filings. Exhibit MSJ  
5 also contains the following wastewater division major topics: (1) a description of the  
6 wastewater system, (2) wastewater flows, (3) growth, (4) compliance with the rules of the  
7 Arizona Department of Environmental Quality and the ACC, (5) plant-in-service  
8 adjustments, (6) depreciation rates, and (7) tariff filings.

9  
10 My conclusions and recommendations from the Engineering Report are contained in the  
11 "Executive Summary", above.

12  
13 **Q. Does this conclude your Direct Testimony?**

14 **A. Yes, it does.**



**Engineering Report for  
Litchfield Park Service Company  
Docket No. W-01427A-09-0104 (Rates)**

**WATER DIVISION**

**November 4, 2009**

**A. LOCATION OF LITCHFIELD PARK SERVICE COMPANY (“COMPANY”)**

The Company is located in the Phoenix West Valley and provides water service to communities within the City of Litchfield Park, City of Goodyear, City of Avondale, and some unincorporated areas of Maricopa County. Figure A-1 shows the location of the Company within Maricopa County and Figure A-2 shows the approximate 20.6 square-miles of water certificated area.

**B. DESCRIPTION OF WATER SYSTEM**

This water system was field inspected on August 28, 2009, by Arizona Corporation Commission (“ACC” or “Commission”) Staff member Marlin Scott, Jr., in the accompaniment of Matthew Garlick and Joey Romo, representing the Company. The operation of this water system consists of 12 wells, three arsenic treatment systems, two storage tanks, three booster systems and a distribution system serving approximately 15,600 customers during the test year ending September 2008. A detailed plant facility description is as follows:

Table W-1. Well Data

Well Name	ADWR ID No.	Turbine Pumps	Flow, GPM	Casing Size & Depth	Meter Size	Arsenic Level
Town Well #1	55-583454	200-Hp	700	16" x 740'	12"	11.2 ppb
Town Well #2	55-611680	75-Hp	550	12" x 503'	8"	9.8 ppb
Town Well #4	55-611678	150-Hp	1,200	16" x 685'	12"	8.8 ppb
Town Well #5	55-611677	150-Hp	1,100	16" x 850'	12"	10.1 ppb
Town Well #6	55-533836	200-Hp	1,200	16" x 650'	12"	20.3 ppb
Airline Well #2	55-611724	250-HP	1,200	16" x 1100'	12"	6.7 ppb
Airline Well #4	55-611726	350-Hp	1,350	20" x 881'	8"	13.1 ppb
Airline Well #5	55-611727	300-Hp	1,350	16" x 810'	8"	46.6 ppb
Airline Well #9	55-611729	350-Hp	1,350	20" x 997'	8"	55.0 ppb
Airline Well #10	55-214539	150-Hp	700	16" x 700'	12"	9.6 ppb
Well 34C	55-611687	175-Hp (Submersible)	1,000	14" x 700'	8"	4.9 ppb
Well 20B	55-611717	200-Hp	1,400	20" x 1100'	12"	17.4 ppb
		TOTAL:	13,100 GPM			

Table W-2. Treatment Facilities

Location	Type of Treatment	Generators
Town Well Reservoir	4.5 MGD capacity arsenic treatment facilities using Bayoxide E33 disposable granular iron media for Town Wells #1, #2, and #6. Town Wells #4 and #5 are blended to the treated water.	Diesel generator – 645 kW
Airline Reservoir	8.4 MGD capacity arsenic treatment facilities using coagulation-filtration method for Airline Wells #4, #5 and #9.	Diesel generator – 1,250 kW
20B Arsenic Treatment Site, 15614 West Charles Blvd.	1,500 GPM capacity arsenic treatment facilities using Bayoxide E33 disposable granular iron media for Well 20B.	None
Wells – AL Well #2, AL Well #10, Well 34C and 20B treatment site.	Chlorination units	Diesel generator - 405 kW @ AL Well #2, AL Well #9, and AL Well #10

Table W-3. Storage Tanks

Capacity Million Gallons (MG)	Quantity (Each)	Location
6.3	1	@ Town Well Reservoir
4.3	1	@ Airline Reservoir
Total: 10.6 MG	2	

Table W-4A. Town Well Reservoir Booster System

<b>BOOSTER SYSTEM AT TOWN WELL RESERVOIR</b>					
<b>Booster Pump Data</b>	<b>BP-1</b>	<b>BP-2</b>	<b>BP-3</b>	<b>BP-4</b>	<b>BP-5</b>
Flow Rate – gpm	2,000	2,000	2,000	3,250	3,250
Horsepower	200	150	100	200	200
Discharge – Inches	12	12	10	12	12
Motor Type	Electric	Natural gas	Electric	Electric	Electric
Fixed or Variable Speed	Fixed	Fixed	Variable	Variable	Variable
Discharge Meters	1 – 10” Mag meter		1 - 10 “ Venturi		
Year Installed	1966	1966	1972	1992	2000

Table W-4B. Airline Reservoir Booster System

<b>BOOSTER SYSTEM AT AIRLINE RESERVOIR</b>				
<b>Booster Pump Data</b>	<b>BP-1</b>	<b>BP-2</b>	<b>BP-3</b>	<b>BP-4</b>
Flow Rate – gpm	3,000	3,000	4,000	4,000
Horsepower	250	250	250	250
Discharge – Inches	16	16	16	16
Motor Type	Electric	Electric	Electric	Electric
Variable / Soft start Speed	Variable	Variable	Soft start	Soft start
Discharge Meters	1 – 30” Mag meter			
Year Installed	2008	2008	2008	2008

Table W-4C. 20B Treatment Site Booster System

<b>BOOSTER SYSTEM AT 20B TREATMENT SITE</b>		
<b>Booster Pump Data</b>	<b>BP-1</b>	<b>BP-2</b>
Flow Rate – gpm	1,500	1,500
Horsepower	50	50
Discharge – Inches	8	8
Pump Type	Centrifugal	Centrifugal
Variable Speed	Variable	Variable
Year Installed	April 2009	April 2009

Table W-5. Water Mains

MAINS		
Size	Material	Length (feet)
2"	PVC	842
3"	AC	1,739
4"	AC	19,100
6"	AC,CL,PVC	384,731
8"	AC,PVC	480,880
10"	AC	3,435
12"	AC,PVC	147,991
16"	DIP	56,996
20"	Steel Pipe	-
24"	Steel Pipe	-
30"	PVC	5,290
36"	Steel Pipe	255
42"	Steel Pipe	325
	Total:	1,101,584 feet or 208.6 miles

Table W-6. Customer Meters

Size	Quantity
5/8 x 3/4-inch	260
3/4-inch	9,108
1- inch	5,697
1-1/2-inch	187
2-inch	612
3-inch	39
4-inch	19
6-inch	-
8-inch	2
10-inch	1
Total:	15,925

Table W-7. Fire Hydrants

Size	Quantity
Standard	3,374

## C. WATER USE

### Water Sold

Based on the information provided by the Company, water use for the test year ending September 2008 is presented in Figure C-1. The customer consumption experienced a high monthly average water use of 827 gallons per day (“GPD”) per connection in August and a low monthly average water use of 375 GPD per connection in January for an average annual use of 618 GPD per connection.

### Non-Account Water

Non-account water should be 10 percent or less. The Company reported 3,888,217,000 gallons pumped and 3,524,767,000 gallons sold, resulting in a water loss of 9.3 percent. This 9.3 percent is within the acceptable limit of 10 percent.

### System Analysis

The water system’s current source capacity of 13,100 GPM and storage capacity of 10.6 million gallons is adequate to serve the present customer base and reasonable growth.

## D. GROWTH

Figure D-1 depicts the customer growth using linear regression analysis. The number of service connections was obtained from annual reports submitted to the Commission. At the end of the test year September 2008, the Company had 15,577 customers and it is projected that this system could have approximately 22,000 customers by December 2013 as shown in Figure D-1.

## E. MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT (“MCESD”) COMPLIANCE

### Compliance

On September 25, 2009, MCESD reported the Company’s system, PWS #07-046, had no major deficiencies and determined that this system is currently delivering water that meets water quality standards required by the Arizona Administrative Code, Title 18, Chapter 4.

### Water Testing Expense

The Company reported its water testing expense at \$28,365 for the test year. Staff has reviewed the Company’s reported expense amount and recommends that the Company’s water testing expense of \$28,365 be adopted for this proceeding.

**F. ARIZONA DEPARTMENT OF WATER RESOURCES (“ADWR”) COMPLIANCE**

The water system is located in the Phoenix Active Management Area (“AMA”). ADWR has reported that this system is in compliance with its requirements governing water providers and/or community water systems.

**G. ARIZONA CORPORATION COMMISSION (“ACC”) COMPLIANCE**

According to the Utilities Division Compliance Section, the Company had no delinquent ACC compliance issues.

**H. PLANT NOT USED AND USEFUL**

In 1988, the Company constructed and placed into service the Litchfield Greens Booster Station. This booster has not been in operation since May 2003. Through its field inspection and Company data responses, Staff found this booster station not used and useful with its corresponding data as follows:

Table H-1. Plant Not Used and Useful

Acct. No.	Litchfield Greens Booster Station Plant Items	Year	Original Cost
304	Structures & Improvements	1988	41,971
311	Electric Pumping Equipment	1988	31,158
339	Other Plant & Miscellaneous Equipment	1998	5,750
	<b>Total:</b>		<b>\$78,879</b>

Therefore, Staff recommends the removal of the Litchfield Greens Booster Station at a cost of \$78,879 from the plant-in-service because this booster station is not used and useful.

**I. POST-TEST YEAR PLANT**

In its application, the Company requested a post-test year (“PTY”) plant adjustment in the amount of \$1,866,965 for an arsenic treatment project for the Company’s Well 20B. Through Company data responses, the Company provided the following updated cost:

Table I-1. Post-Test Year Plant

Acct. No.	Plant item	Cost
303	Land & Land Rights	372,446
304	Structures & Improvements	1,350,246
320	Water Treatment Equipment	159,838
339	Other Plant & Miscellaneous Equipment	3,240
	<b>Total:</b>	<b>\$1,885,770</b>

The construction of this arsenic treatment project commenced on October 2008 and completed in January 2009. On January 30, 2009, MCESD issued a Certificate of Approval to Commence Operations to begin the facilities operation for the Validation and Commissioning Testing requirements. On June 24, 2009, MCESD issued the Certificate of Approval of Construction for this project. Based on these approvals, along with Staff's field inspection to confirm the plant operation, Staff concludes that the requested PTY item is used and useful for the provision of service to customers.

#### J. DEPRECIATION RATES

In the prior rate case, the Company adopted Staff's typical and customary water depreciation rates. These rates are presented in Table J-1 and it is recommended that the Company continue to use these depreciation rates by individual National Association of Regulatory Utility Commissioners category.

#### K. SERVICE LINE AND METER INSTALLATION CHARGES

The Company proposed changes to its service line and meter installation charges. The Company's proposed charges are similar to Staff's customary installation charges. Since the Company may at times install meters on existing service lines, it would be appropriate for some customers to only be charged for the meter installation. Therefore, Staff recommends approval of the proposed charges as shown in Table K-1, with separate installation charges for the service line and meter.

#### L. CURTAILMENT TARIFF

The Company has an approved curtailment tariff that became effective on December 9, 2002.

**M. BACKFLOW PREVENTION TARIFF**

The Company has an approved backflow prevention tariff that became effective on January 20, 1998.

**N. WATER HOOK-UP FEE TARIFF**

The Company currently does not have an approved Water Hook-Up Fee ("HUF") Tariff. In its rate application, the Company requested a Water HUF Tariff starting at \$1,800 for a 5/8 x 3/4-inch meter. The proposed \$1,800 is based on the Company's recent costs for well development, reservoir, and arsenic treatment facilities that totaled to \$1,950 per service connection. The Company however selected a lesser amount of \$1,800 to be adopted for its HUF Tariff.

The Company also submitted its HUF Tariff that had different language than in Staff's updated HUF Tariff template. Staff has reviewed the Company's proposed language changes and will accept some of the Company's language changes that are shaded in the Tariff. Therefore, Staff recommends the adoption of the specific and updated tariff language contained in Attachment -Water HUF Tariff.

FIGURES

Maricopa County Map ..... Figure A-1

Certificated Area ..... Figure A-2

Water System Use ..... Figure C-1

Water System Growth ..... Figure D-1

TABLES

Water Depreciation Rates ..... Table J-1

Service Line and Meter Installation Charges ..... Table K-1

ATTACHMENT

Water Hook-Up Fee Tariff ..... Water HUF Tariff

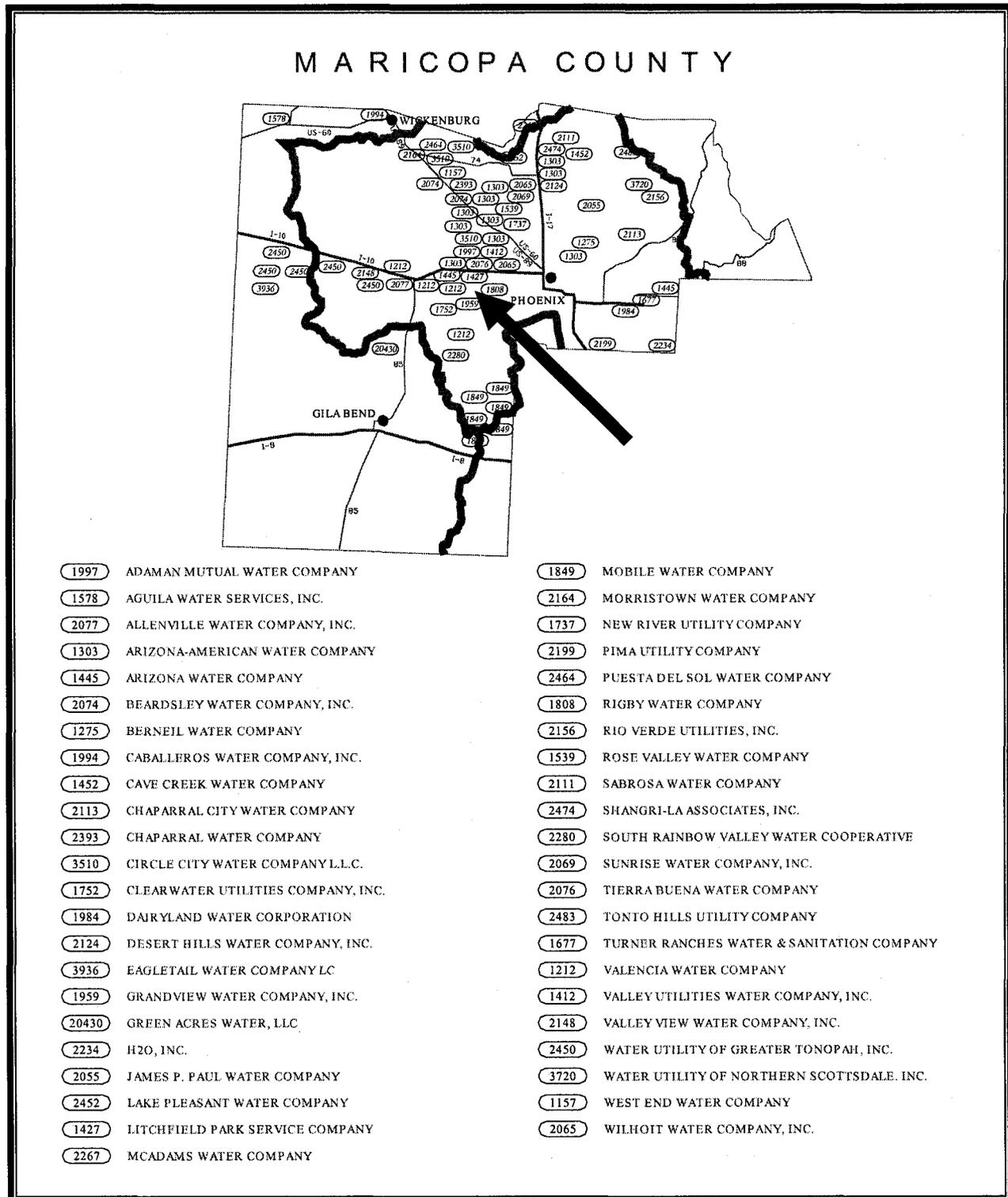


Figure A-1. Maricopa County Map

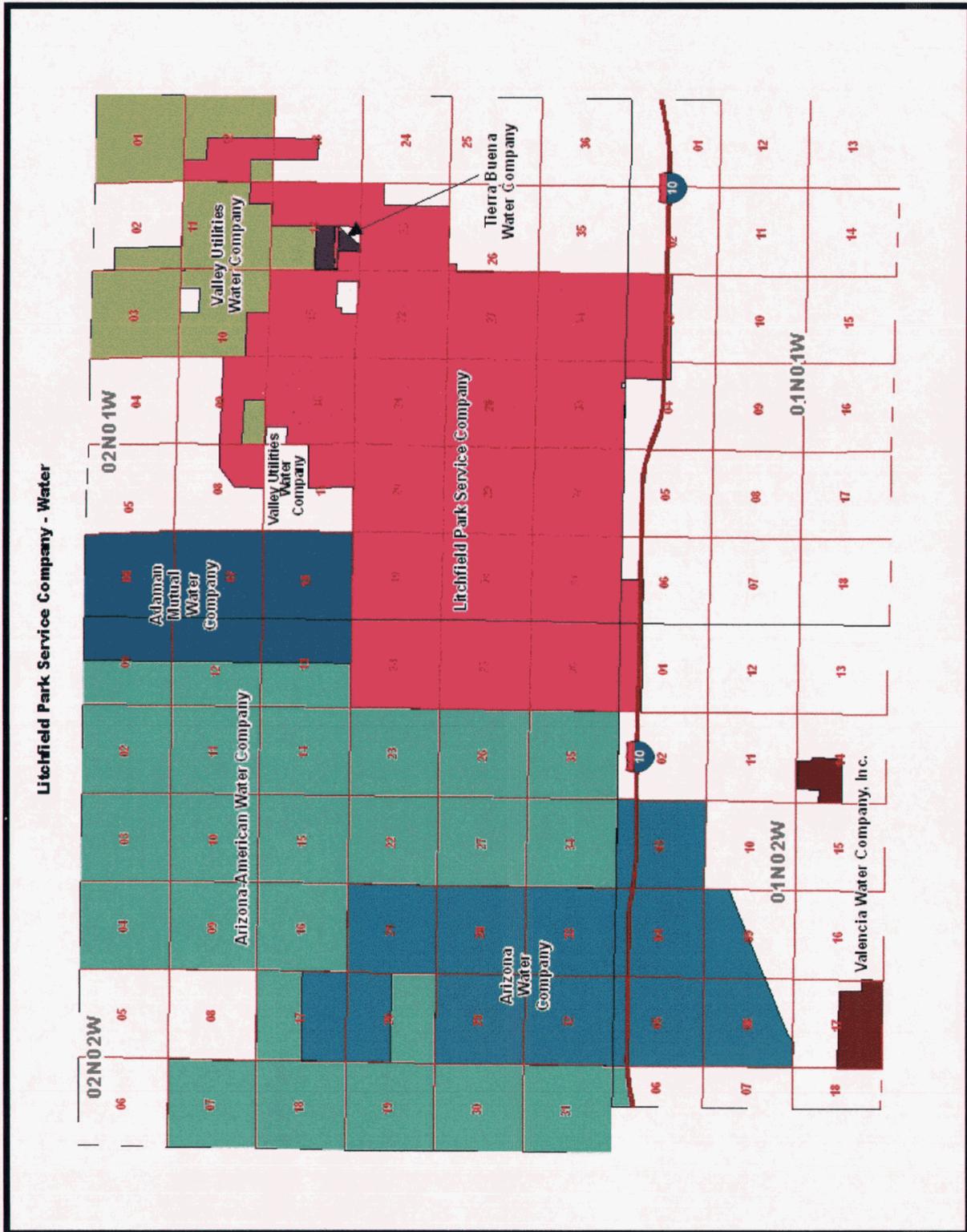


Figure A-2. Certificated Area

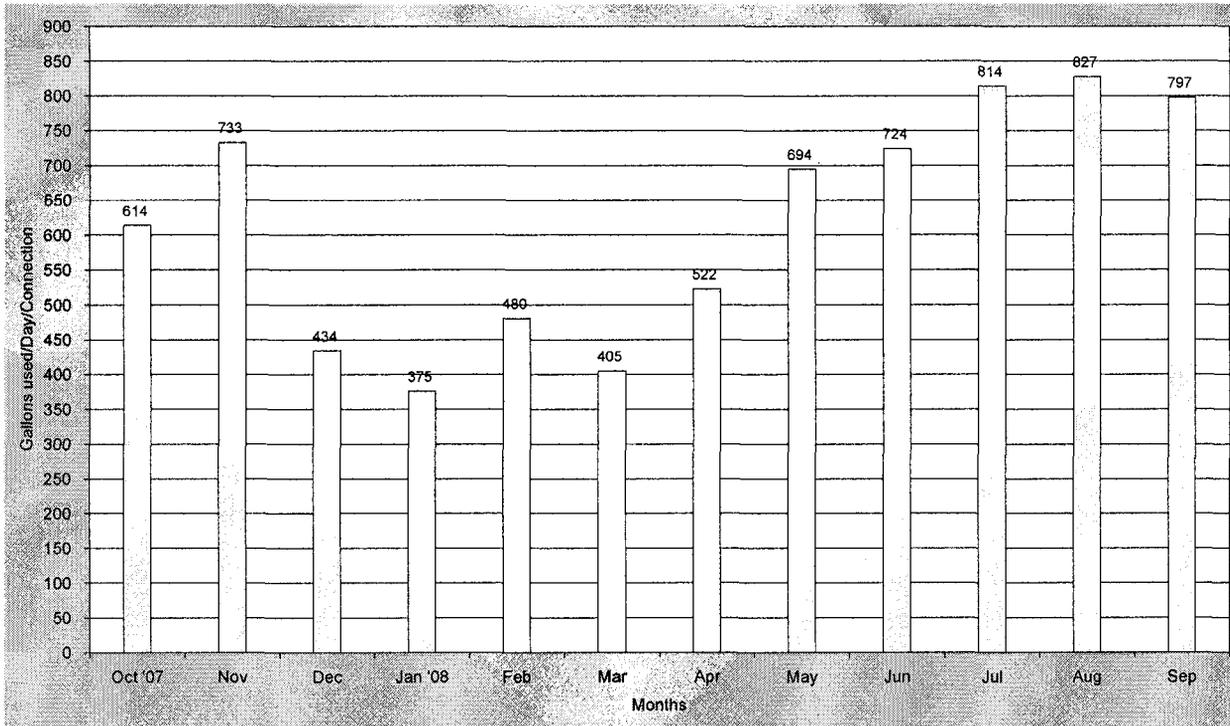


Figure C-1. Water System Use

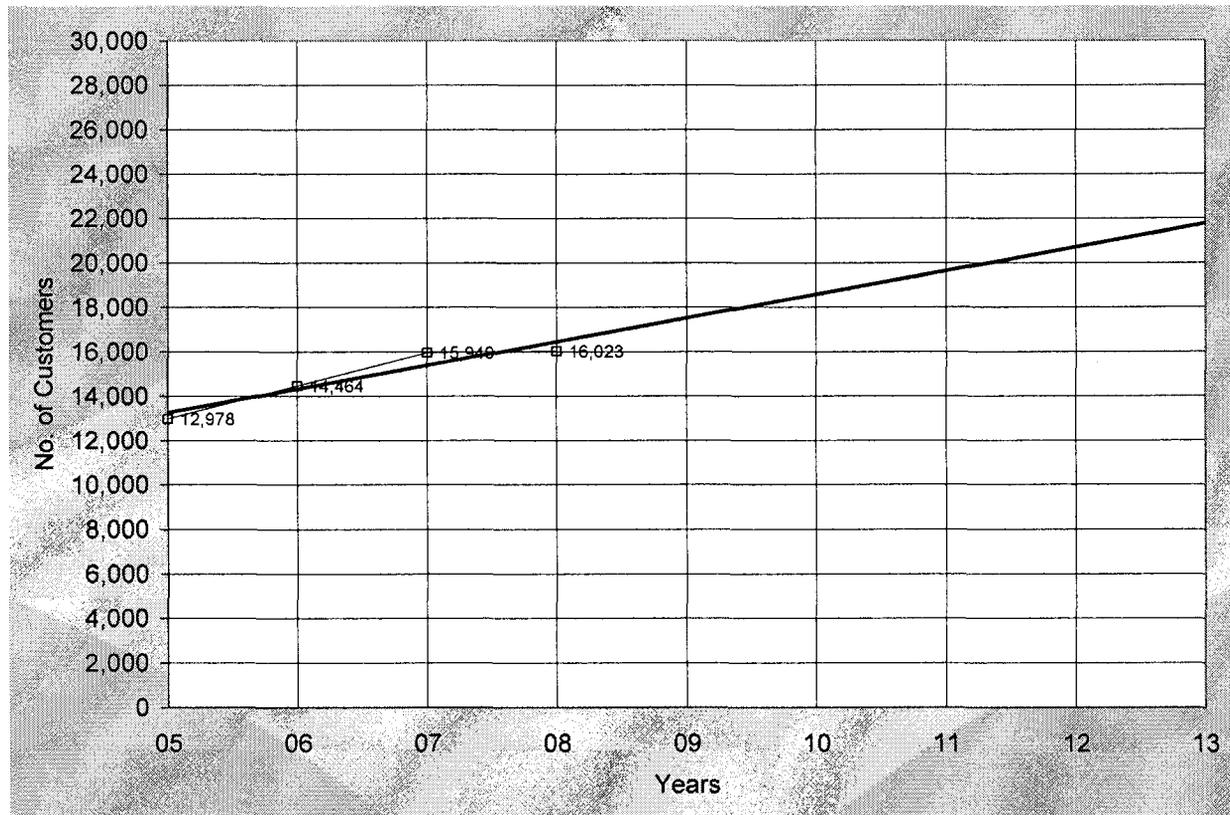


Figure D-1. Water System Growth

Table J-1. Water Depreciation Rates

NARUC Acct. No.	Depreciable Plant	Average Service Life (Years)	Annual Accrual Rate (%)
304	Structures & Improvements	30	3.33
305	Collecting & Impounding Reservoirs	40	2.50
306	Lake, River, Canal Intakes	40	2.50
307	Wells & Springs	30	3.33
308	Infiltration Galleries	15	6.67
309	Raw Water Supply Mains	50	2.00
310	Power Generation Equipment	20	5.00
311	Pumping Equipment	8	12.5
320	Water Treatment Equipment		
320.1	Water Treatment Plants	30	3.33
320.2	Solution Chemical Feeders	5	20.0
330	Distribution Reservoirs & Standpipes		
330.1	Storage Tanks	45	2.22
330.2	Pressure Tanks	20	5.00
331	Transmission & Distribution Mains	50	2.00
333	Services	30	3.33
334	Meters	12	8.33
335	Hydrants	50	2.00
336	Backflow Prevention Devices	15	6.67
339	Other Plant & Misc Equipment	15	6.67
340	Office Furniture & Equipment	15	6.67
340.1	Computers & Software	5	20.00
341	Transportation Equipment	5	20.00
342	Stores Equipment	25	4.00
343	Tools, Shop & Garage Equipment	20	5.00
344	Laboratory Equipment	10	10.00
345	Power Operated Equipment	20	5.00
346	Communication Equipment	10	10.00
347	Miscellaneous Equipment	10	10.00
348	Other Tangible Plant	---	---

NOTE: Acct. 348 – Other Tangible Plant may vary from 5% to 50%. The depreciation rate would be set in accordance with the specific capital items in this account.

Table K-1. Service Line and Meter Installation Charges

Meter Size	Current Total Charges	Proposed Service Line Charges	Proposed Meter Charges	Proposed Total Charges
5/8 x3/4-inch	N/T	\$385	\$135	\$520
3/4-inch	\$225	\$385	\$215	\$600
1-inch	\$300	\$435	\$255	\$690
1-1/2-inch	\$500	\$470	\$465	\$935
2-inch	\$675	-	-	-
Over 2-inch	At Cost	-	-	-
2-inch Turbine	N/T	\$630	\$965	\$1,595
2-inch Compound	N/T	\$630	\$1,690	\$2,320
3-inch Turbine	N/T	\$805	\$1,470	\$2,275
3-inch Compound	N/T	\$845	\$2,265	\$3,110
4-inch Turbine	N/T	\$1,170	\$2,350	\$3,520
4-inch Compound	N/T	\$1,230	\$3,245	\$4,475
6-inch Turbine	N/T	\$1,730	\$4,545	\$6,275
6-inch Compound	N/T	\$1,770	\$6,280	\$8,050
8-inch & Larger	N/T	At Cost	At Cost	At Cost

Note: N/T = No tariff.

## TARIFF SCHEDULE

UTILITY: Litchfield Park Service Company - Water  
DOCKET NO. 09-0104

DECISION NO. \_\_\_\_\_  
EFFECTIVE DATE: \_\_\_\_\_

### WATER HOOK-UP FEE

#### I. Purpose and Applicability

The purpose of the off-site hook-up fees payable to Litchfield Park Service Company - Water Division (“the Company”) pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities necessary to provide water production, delivery, storage and pressure among all new service connections. These charges are applicable to all new service connections undertaken via Main Extension Agreements or requests for service not requiring a Main Extension Agreement entered into established after the effective date of this tariff. The charges are one-time charges and are payable as a condition to Company’s establishment of service, as more particularly provided below.

#### II. Definitions

Unless the context otherwise requires, the definitions set forth in R-14-2-401 of the Arizona Corporation Commission’s (“Commission”) rules and regulations governing water utilities shall apply in interpreting this tariff schedule.

“Applicant” means any party entering into an agreement with Company for the installation of water facilities to serve new service connections, and may include Developers and/or Builders of new residential subdivisions and/or commercial and industrial properties.

“Company” means Litchfield Park Service Company – Water Division.

“Main Extension Agreement” means any agreement whereby an Applicant, Developer and/or Builder agrees to advance the costs of the installation of water facilities necessary to the Company to serve new service connections within a development, or installs such water facilities necessary to serve new service connections and transfers ownership of such water facilities to the Company, which agreement shall require the approval of the Commission pursuant to A.A.C. R-14-2-406, and shall have the same meaning as “Water Facilities Agreement” or “Line Extension Agreement.”

“Off-site Facilities” means wells, storage tanks and related appurtenances necessary for proper operation, including engineering and design costs. Offsite facilities may also include booster pumps, pressure tanks, transmission mains and related appurtenances necessary for proper

operation if these facilities are not for the exclusive use of the applicant and will benefit the entire water system.

“Service Connection” means and includes all service connections for single-family residential, commercial, industrial or other uses, regardless of meter size.

**III. Water Hook-up Fee**

For each new service connection, the Company shall collect an off-site hook-up fee derived from the following table:

OFF-SITE WATER HOOK-UP FEE TABLE		
METER SIZE	SIZE FACTOR	TOTAL FEE
5/8" x 3/4"	1	\$1,800
3/4"	1.5	\$2,700
1"	2.5	\$4,500
1-1/2"	5	\$9,000
2"	8	\$14,400
3"	16	\$28,800
4"	25	\$45,000
6" or larger	50	\$90,000

**IV. Terms and Conditions**

(A) Assessment of One Time Off-Site Hook-up Fee: The off-site hook-up fee may be assessed only once per parcel, service connection, or lot within a subdivision (similar to meter and service line installation charge).

(B) Use of Off-Site Hook-up Fee: Off-site hook-up fees may only be used to pay for capital items of off-site facilities, or for repayment of loans obtained to fund the cost of installation of off-site facilities. Off-site hook-up fees shall not be used to cover repairs, maintenance, or operational costs.

(C) Time of Payment:

- 1) For those requiring a Main Extension Agreement: In the event that the person or entity that will be constructing improvements (“Applicant”, “Developer” or “Builder”) is otherwise required to enter into a Main Extension Agreement, whereby the Applicant, Developer or Builder agrees to advance the costs of installing mains, valves, fittings, hydrants and other on-site improvements in order to extend service in accordance with R-

14-2-406(B), payment of the Hook-Up Fees required hereunder shall be made by the Applicant, Developer or Builder no later than within 15 calendar days after receipt of notification from the Company that the Utilities Division of the Arizona Corporation Commission has approved the Main Extension Agreement in accordance with R-14-2-406(M).

- 2) For those connecting to an existing main: In the event that the Applicant, Developer or Builder for service is not required to enter into a Main Extension Agreement, the Hook-Up Fee charges hereunder shall be due and payable at the time the meter and service line installation fee is due and payable.

(D) Off-Site Facilities Construction By Developer: Company and Applicant, Developer, or Builder may agree to construction of off-site facilities necessary to serve a particular development by Applicant, Developer or Builder, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site hook-up fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant, Developer or Builder and conveyed to Company is less than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall pay the remaining amount of off-site hook-up fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant, Developer or Builder and conveyed to Company is more than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall be refunded the difference upon acceptance of the off-site facilities by the Company.

(E) Failure to Pay Charges; Delinquent Payments: The Company will not be obligated to make an advance commitment to provide or actually provide water service to any Developer, Builder or other applicant for service in the event that the Developer, Builder or other applicant for service has not paid in full all charges hereunder. Under no circumstances will the Company set a meter or otherwise allow service to be established if the entire amount of any payment due hereunder has not been paid.

(F) Large Subdivision Projects: In the event that the Applicant, Developer or Builder is engaged in the development of a residential subdivision containing more than 150 lots, the Company may, in its discretion, agree to payment of off-site hook-up fees in installments. Such installments may be based on the residential subdivision development's phasing, and should attempt to equitably apportion the payment of charges hereunder based on the Applicant's, Developer's or Builder's construction schedule and water service requirements.

(G) Off-Site Hook-Up Fees Non-refundable: The amounts collected by the Company as Hook-Up Fees pursuant to the off-site hook-up fee tariff shall be non-refundable contributions in aid of construction.

(H) Use of Off-Site Hook-Up Fees Received: All funds collected by the Company as off-site hook-up fees shall be deposited into a separate interest bearing trust account and used solely for

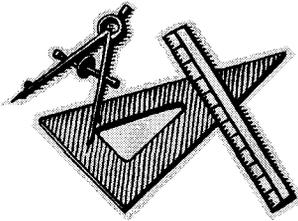
the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities that will benefit the entire water system.

(I) Off-Site Hook-up Fee in Addition to On-site Facilities: The off-site hook-up fee shall be in addition to any costs associated with the construction of on-site facilities under a Main Extension Agreement.

(J) Disposition of Excess Funds: After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to the off-site hook-up fees, or if the off-site hook-up fee has been terminated by order of the Arizona Corporation Commission, any funds remaining in the trust shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

(K) Fire Flow Requirements: In the event the applicant for service has fire flow requirements that require additional facilities beyond those facilities whose costs were included in the off-site hook-up fee, and which are contemplated to be constructed using the proceeds of the off-site hook-up Fee, the Company may require the applicant to install such additional facilities as are required to meet those additional fire flow requirements, as a non-refundable contribution, in addition to the off-site hook-up fee.

(L) Status Reporting Requirements to the Commission: The Company shall submit a calendar year Off-Site Hook-Up Fee status report each January to Docket Control for the prior twelve (12) month period, beginning January 2011, until the hook-up fee tariff is no longer in effect. This status report shall contain a list of all customers that have paid the hook-up fee tariff, the amount each has paid, the physical location/address of the property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and a list of all facilities that have been installed with the tariff funds during the 12 month period.



**Engineering Report for  
Litchfield Park Service Company  
Docket No. SW-01428A-09-0103 (Rates)**

**WASTEWATER DIVISION**

**November 4, 2009**

**A. LOCATION OF LITCHFIELD PARK COMPANY (“COMPANY”)**

The Company is located in the Phoenix West Valley and provides wastewater service to communities within the City of Litchfield Park, City of Goodyear, City of Avondale, and some unincorporated areas of Maricopa County. Figure A-1 shows the location of the Company within Maricopa County and Figure A-2 shows the approximate 20.8 square-miles of wastewater certificated area.

**B. DESCRIPTION OF WASTEWATER SYSTEM**

The Company operates its Palm Valley Water Reclamation Facility (“WRF”) and a collection system. This plant and its system was field inspected on September 2, 2009, by Arizona Corporation Commission (“ACC” or “Commission”) Staff member Marlin Scott, Jr., in the accompaniment of Matthew Garlick and Ray Scott, representing the Company.

The operation of the Palm Valley WRF consists of a 4.1 million gallon per day (“MGD”) sequential batch reactor (“SBR”) treatment plant and wastewater collection system consisting of two collection lift stations, and approximately 319 miles of wastewater mains serving approximately 14,400 service laterals during the test year ending September 2008. The effluent from the WRF is pumped to golf courses for reuse. The wastewater system schematic is shown in Figures B-1 with detailed plant facility descriptions as follows:

Table WW-1. Water Reclamation Facility

Name	Plant Capacity	Location
Palm Valley WRF	4.1 MGD treatment plant consists of influent lift station, headworks with fine screens and grit removal, anoxic reactor/equalization tank and SBRs for nitrification/denitrification, disc-filters, ultraviolet disinfection system, aerobic sludge digesters, and sludge dewatering centrifuges. Amendments include installing new odor control systems, centrifuge, filter fee/effluent pumps, and ultraviolet system.	14222 West McDowell Road, Goodyear, Arizona

Table WW-2. Lift Stations

Lift Station No. and Name	No. of Pumps	Horsepower per Pump	Capacity per Pump (GPM)	Wet Well Capacity (gals.)
Lift Station No. 2 – Casitas Bonitas	2	20	350	2,500
Lift Station No. 3 - Sarival	3	47	1,050	30,000

Table WW-3. Structures

Location	Generators
Palm Valley WRF	Diesel generator – 1,500 kW
Lift Station #2– Casitas Bonitas	Diesel generator – 80 kW
Lift Station #3 - Sarival	Diesel generator – 125 kW

Table WW-4. Force Mains

Diameter	Material	Length (ft.)
10-inch	PVC	17,550
12-inch	PVC	6,100
8-inch	DIP	3,550
10-inch	DIP	3,925
12-inch	DIP	47
16-inch	DIP	5,200
24-inch	DIP	6,484
	Total:	42,856 ft. or 8.1 miles

Table WW-5. Collection Mains

Diameter	Material	Length (ft.)
4-inch	VCP/DIP/PVC	208,097
6-inch	VCP/DIP/PVC	4,667
8-inch	VCP/DIP/PVC	1,157,786
10-inch	VCP/DIP/PVC	70,196

12-inch	VCP/DIP/PVC	53,213
15-inch	VCP/DIP/PVC	85,886
18-inch	VCP/DIP/PVC	22,180
21-inch	VCP/DIP/PVC	23,016
24-inch	VCP/DIP/PVC	12,188
30-inch	VCP/DIP/PVC	3,663
Total:		1,640,892 ft. or 310.8 miles

Table WW-6. Manholes

Size	Quantity
Standard	4,250
Drop	61

Table WW-7. Cleanouts

Quantity
170 each

\* Table WW-8. Service Laterals & Customer Class

Lateral Size	Quantity	Customer Class	Units
4-inch	13,979	Residential	14,514
6-inch	353	HOA	815
8-inch	29	Multi-Units	1,846
10-inch	1	Commercial	373
		Resort	344
		Schools	9
Total:	14,362		17,901

\* Note: The data in this table was provided by a Company data response on October 14, 2009.

## C. WASTEWATER FLOWS

### Wastewater Flows

Based on the information provided by the Company, wastewater flows for the test year ending September 2008 are presented in Figure C-1. For the average daily flows, November 2007 experienced the highest flow of 3,495,200 gallons per day ("GPD"). For the peak day flows, October 2007 had the highest flow when 4,158,000 gallons were treated in one day.

### System Analysis

Staff concludes that the 4.1 MGD WRF capacity is adequate to serve the present customer base and reasonable growth.

## D. GROWTH

Figure D-1 depicts the customer growth, per service laterals and customer units, using linear regression analysis. The number of service laterals and customer units were obtained from the Company. During the test year ending September 2008, the Company had approximately 14,400 service laterals and 17,900 customer units. It is projected that the Company could have approximately 15,500 service laterals and 20,500 customer units by year ending 2013.

## E. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ("ADEQ") COMPLIANCE

On March 3, 2009, ADEQ reported the Company's Palm Valley WRF, Inventory No. 100310, was in total compliance with ADEQ regulations.

## F. ARIZONA CORPORATION COMMISSION ("ACC") COMPLIANCE

According to the Utilities Division Compliance Section, the Company had no delinquent ACC compliance issues.

## G. PLANT NOT USED AND USEFUL

In the prior rate case, the Company did not own or operate a wastewater treatment plant. Instead, the wastewater was transported and treated at the City of Goodyear Wastewater Treatment Facilities. In this rate application, the Company has reported the addition of the Palm Valley WRF and the retirement of the Goodyear capacity.

Since the Company's wastewater operation has changed due to transporting wastewater to its own Palm Valley WRF, a number of lift stations were taken out of service. Through its field inspection and Company data responses, Staff found three lift stations no longer in operation and used and useful with their corresponding data as follows:

Table G-1. Plant Not Used and Useful

Acct. No.	Plant items	Year Placed into Service	Year Taken out of Service	Original Cost	Total Original Cost
354	Structures & Improvements				
	Wigwam Lift Station	1992	2002	190,628	
	Bullard Lift Station	1992	2002	122,785	
	Litchfield Greens Lift Station	1988	2007	75,421	
					388,834
361	Collection Sewer – Gravity				
	Wigwam Lift Station	1992	2002	14,289	
	Bullard Lift Station	1992	2002	3,238	
	Litchfield Greens Lift Station	1988	2007	1,203	
					18,730
371	Pumping Equipment				
	Wigwam Lift Station	1992	2002	48,852	
	Bullard Lift Station	1992	2002	43,069	
	Litchfield Greens Lift Station	1988	2007	12,071	
					103,992
389	Other Plant & Miscell. Equipment				
	Wigwam Lift Station	1992	2002	17,595	
	Bullard Lift Station	1992	2002	17,595	
	Litchfield Greens Lift Station	1988	2007	8,231	
					43,421
	<b>Totals:</b>			<b>\$544,977</b>	<b>\$554,977</b>

Therefore, Staff recommends the removal of the three lift stations, totaling to \$554,977, from the plant-in-service because these booster stations are not used and useful.

#### H. DEPRECIATION RATES

In the prior rate case, the Company adopted Staff's typical and customary wastewater depreciation rates. These rates are presented in Table H-1 and it is recommended that the Company continue to use these depreciation rates by individual National Association of Regulatory Utility Commissioners category.

**I. WASTEWATER HOOK-UP FEE TARIFF**

The Company has an approved Wastewater Hook-Up Fee (“HUF”) Tariff, starting at \$2,450 per Equivalent Residential Unit (“EDU”), that became effective on April 1, 2008. In its rate application, the Company is requesting to modify its Wastewater HUF Tariff to begin at \$1,800 per EDU. The proposed \$1,800 is based on the Company’s lower (\$1,780 per EDU) and upper (\$3,824 per EDU) estimates of per-gallon costs to build expansion capability at the existing Palm Valley WRF versus a new plant site. The Company selected the amount of \$1,800 to be adopted for its HUF Tariff.

The Company also submitted its HUF Tariff that had different language than in Staff’s updated HUF Tariff template. Staff has reviewed the Company’s proposed language changes and will accept some of the Company’s language changes that are shaded in the Tariff. Therefore, Staff recommends the adoption of the specific and updated tariff language contained in Attachment –Wastewater HUF Tariff.

FIGURES

Maricopa County Map ..... Figure A-1

Certificated Area ..... Figure A-2

Wastewater System Flows ..... Figure C-1

Wastewater System Growth..... Figure D-1

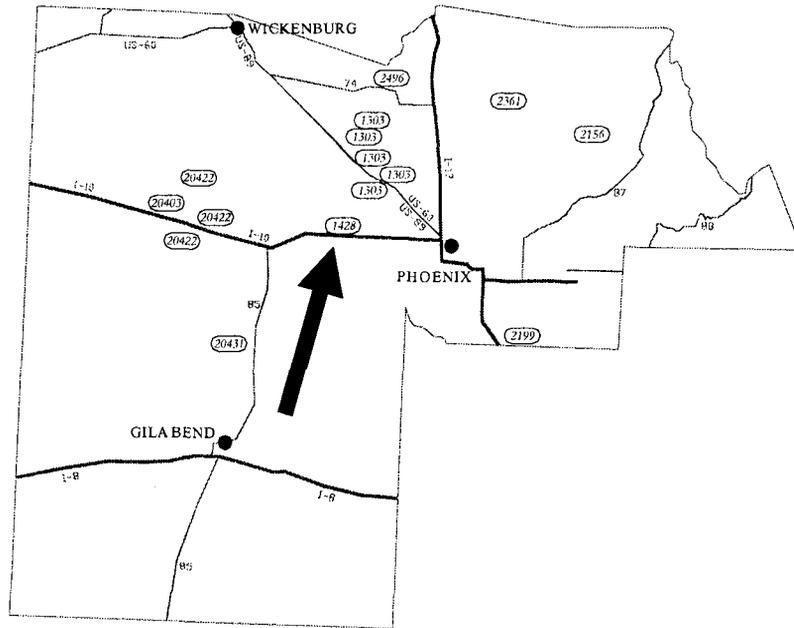
TABLE

Wastewater Depreciation Rates ..... Table H-1

ATTACHMENT

Wastewater Hook-Up Fee Tariff ..... Wastewater HUF Tariff

# MARICOPA COUNTY (SEWER)



- |  |  |
|--|--|
| (1303) ARIZONA-AMERICAN WATER COMPANY    | (2496) LAKE PLEASANT SEWER COMPANY     |
| (20403) BALTERRA SEWER CORPORATION       | (1428) LITCHFIELD PARK SERVICE COMPANY |
| (2361) BLACK MOUNTAIN SEWER CORPORATION  | (2199) PIMA UTILITY COMPANY            |
| (20431) GREEN ACRES SEWER, LLC           | (2156) RIO VERDE UTILITIES, INC.       |
| (20422) HASSAYAMPA UTILITY COMPANY, INC. |  |

Figure A-1. Maricopa County Map



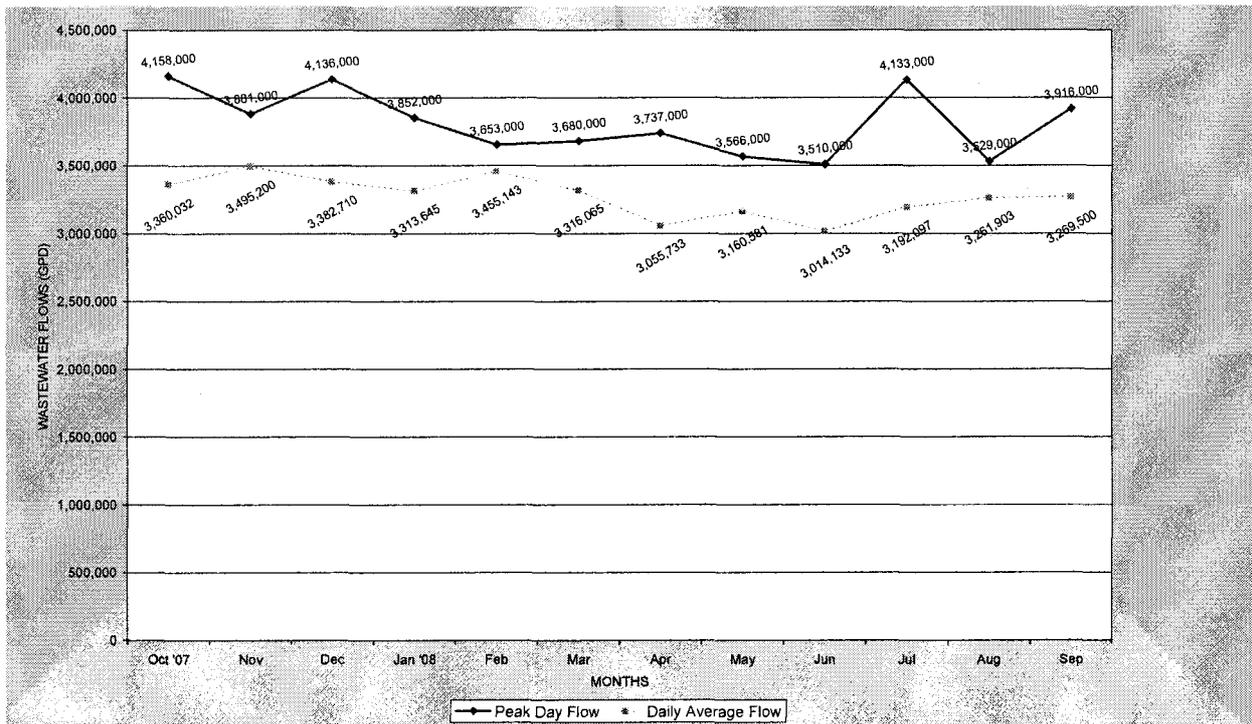


Figure C-1. Wastewater System Flows

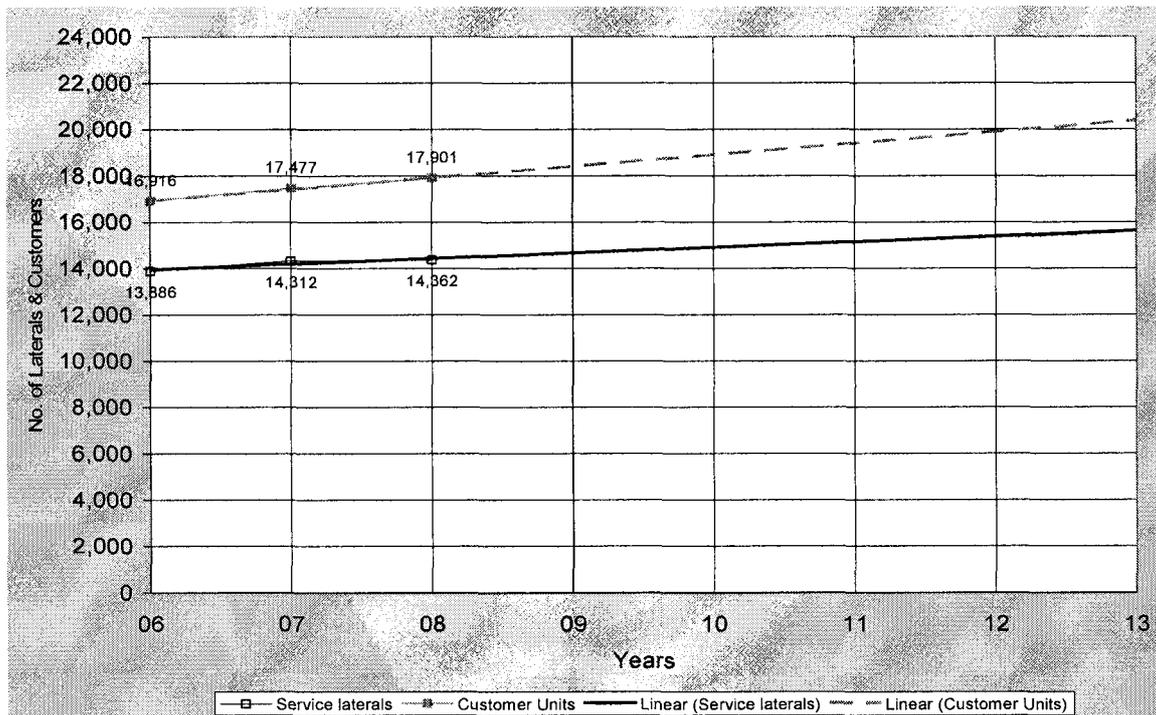


Figure D-1. Wastewater System Growth

Table H-1. Wastewater Depreciation Rates

NARUC Acct. No.	Depreciable Plant	Average Service Life (Years)	Annual Accrual Rate (%)
354	Structures & Improvements	30	3.33
355	Power Generation Equipment	20	5.00
360	Collection Sewers – Force	50	2.0
361	Collection Sewers- Gravity	50	2.0
362	Special Collecting Structures	50	2.0
363	Services to Customers	50	2.0
364	Flow Measuring Devices	10	10.00
365	Flow Measuring Installations	10	10.00
366	Reuse Services	50	2.00
367	Reuse Meters & Meter Installations	12	8.33
370	Receiving Wells	30	3.33
371	Pumping Equipment	8	12.50
374	Reuse Distribution Reservoirs	40	2.50
375	Reuse Transmission & Distribution System	40	2.50
380	Treatment & Disposal Equipment	20	5.0
381	Plant Sewers	20	5.0
382	Outfall Sewer Lines	30	3.33
389	Other Plant & Miscellaneous Equipment	15	6.67
390	Office Furniture & Equipment	15	6.67
390.1	Computers & Software	5	20.0
391	Transportation Equipment	5	20.0
392	Stores Equipment	25	4.0
393	Tools, Shop & Garage Equipment	20	5.0
394	Laboratory Equipment	10	10.0
395	Power Operated Equipment	20	5.0
396	Communication Equipment	10	10.0
397	Miscellaneous Equipment	10	10.0
398	Other Tangible Plant	----	----

NOTE: Acct. 398 – Other Tangible Plant may vary from 5% to 50%. The depreciation rate would be set in accordance with the specific capital items in this account.

## TARIFF SCHEDULE

UTILITY: Litchfield Park Service Company – Wastewater  
DOCKET NO.: 09-0103

DECISION NO. \_\_\_\_\_  
EFFECTIVE DATE: \_\_\_\_\_

### WASTEWATER HOOK-UP FEE

#### I. Purpose and Applicability

The purpose of the off-site facilities hook-up fees payable to Litchfield Park Service Company – Wastewater Division (“the Company”) pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities to provide wastewater treatment and disposal facilities among all new service laterals. These charges are applicable to all new service laterals undertaken via Collection Main Extension Agreements, or requests for service not requiring a Collection Main Extension Agreement, entered into after the effective date of this tariff. The charges are one-time charges and are payable as a condition to Company’s establishment of service, as more particularly provided below.

#### II. Definitions

Unless the context otherwise requires, the definitions set forth in R-14-2-601 of the Arizona Corporation Commission’s (“Commission”) rules and regulations governing sewer utilities shall apply interpreting this tariff schedule.

“Applicant” means any party entering into an agreement with Company for the installation of wastewater facilities to serve new service laterals, and may include Developers and/or Builders of new residential subdivisions, and industrial or commercial properties.

“Company” means Litchfield Park Service Company – Wastewater Division.

“Collection Main Extension Agreement” means an agreement whereby an Applicant, Developer and/or Builder agrees to advance the costs of the installation of wastewater facilities necessary to serve new service laterals, or install wastewater facilities to serve new service laterals and transfer ownership of such wastewater facilities to the Company, which agreement does not require the approval of the Commission pursuant to A.A.C. R-14-2-606, and shall have the same meaning as “Wastewater Facilities Agreement”.

“Off-site Facilities” means the wastewater treatment plant, sludge disposal facilities, effluent disposal facilities and related appurtenances necessary for proper operation, including engineering and design costs. Offsite facilities may also include lift stations, force mains, transportation mains and related appurtenances necessary for proper operation if these facilities are not for the exclusive use of the applicant and benefit the entire wastewater system.

“Service Lateral” means and includes all service laterals for single-family residential, commercial, industrial or other uses.

### III. Wastewater Hook-up Fee

For each new service lateral, the Company shall collect a Hook-Up Fee of \$1,800 based on the Equivalent Residential Unit (“ERU”) of 320 gallons per day. Commercial Applicants shall pay based on the total ERUs of their development calculated by dividing the estimated total daily wastewater capacity usage needed for service using standard engineering standards and criteria by the ERU factor of 320 gallons per day.

### IV. Terms and Conditions

(A) Assessment of One Time Off-Site Facilities Hook-up Fee: The off-site facilities hook-up fee may be assessed only once per parcel, service lateral, or lot within a subdivision (similar to a service lateral installation charge).

(B) Use of Off-Site Facilities Hook-up Fee: Off-site facilities hook-up fees may only be used to pay for capital items of off-site facilities, or for repayment of loans obtained to fund the cost of installation of off-site facilities. Off-site hook-up fees shall not be used to cover repairs, maintenance, or operational costs.

(D) Time of Payment:

(1) In the event that the person or entity that will be constructing improvements (“Applicant”, “Developer” or “Builder”) is otherwise required to enter into a Collection Main Extension Agreement, payment of the fees required hereunder shall be made by the Applicant, Developer or Builder when operational acceptance is issued for the on-site wastewater facilities constructed to serve the improvement.

(2) In the event that the Applicant, Developer or Builder for service is not required to enter into a Collection Main Extension Agreement, the Hook-Up Fee charges hereunder shall be due and payable at the time wastewater service is requested for the property.

(E) Off-Site Facilities Construction by Developer: Company and Applicant, Developer, or Builder may agree to construction of off-site facilities necessary to serve a particular development by Applicant, Developer or Builder, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site hook-up fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant, Developer or Builder and conveyed to Company is less than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall pay the remaining amount of off-site hook-up fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant, Developer or Builder and conveyed to Company is more than the applicable off-site

hook-up fees under this Tariff, Developer or Builder shall be refunded the difference upon acceptance of the off-site facilities by the Company.

(F) Failure to Pay Charges; Delinquent Payments: The Company will not be obligated to make an advance commitment to provide or actually provide wastewater service to any Developer, Builder or other applicant for service in the event that the Developer, Builder or other applicant for service has not paid in full all charges hereunder. Under no circumstances will the Company connect service or otherwise allow service to be established if the entire amount of any payment has not been paid.

(F) Off-Site Hook-Up Fees Non-refundable: The amounts collected by the Company pursuant to the off-site facilities hook-up fee tariff shall be non-refundable contributions in aid of construction.

(G) Use of Off-Site Hook-Up Fees Received: All funds collected by the Company as off-site facilities hook-up fees shall be deposited into a separate account and bear interest and shall be used solely for the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities.

(H) Off-Site Facilities Hook-up Fee in Addition to On-site Facilities: The off-site facilities hook-up fee shall be in addition to any costs associated with the construction of on-site facilities under a Collection Main Extension Agreement.

(I) Disposition of Excess Funds: After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to the off-site facilities hook-up fees, or if the off-site facilities hook-up fee has been terminated by order of the Arizona Corporation Commission, any funds remaining in the trust shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

(J) Status Reporting Requirements to the Commission: The Company shall submit a calendar year Off-Site Facilities Hook-Up Fee status report each January to Docket Control for the prior twelve (12) month period, beginning January 2011, until the hook-up fee tariff is no longer in effect. This status report shall contain a list of all customers that have paid the hook-up fee tariff, the amount each has paid, the physical location/address of the property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and an itemization of all facilities that have been installed using the tariff funds during the 12 month period.