

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

Application of Water Service Corporation)
of Kentucky for a General Adjustment)
in Existing Rates)

Case No. 2013-00237

REBUTTAL TESTIMONY OF STEVEN M. LUBERTOZZI

President – Kentucky Operations
2335 Sanders Road
Northbrook, IL 60062

1 **Q. PLEASE STATE YOUR NAME, JOB TITLE, EMPLOYER, AND BUSINESS**
2 **ADDRESS.**

3 **A.** My name is Steven M. Lubertozi, President of Water Service Corporation of
4 Kentucky. My business address is 2335 Sanders Road, Northbrook, Illinois
5 60062.

6

7 **Q. MR. LUBERTOZZI, HAVE YOU PREVIOUSLY SUBMITTED DIRECT**
8 **TESTIMONY IN THIS PROCEEDING?**

9 **A.** No, but I have testified in front of this Commission previously.

10

11 **Q. WHAT IS THE NATURE OF YOUR REBUTTAL TESTIMONY IN THIS CASE?**

12 **A.** My rebuttal testimony will address the direct testimony of the Office of Attorney
13 General's witness Andrea C. Crane as it relates to the allocation of corporate
14 service company costs, specifically the \$167,131 (Appendix B, Schedule ACC-6,
15 Column (A), Row 15), and disallowance of Project Phoenix expenses.

16

17 **Q. MR. LUBERTOZZI, PLEASE PROVIDE MORE DETAIL AS TO WHAT IS**
18 **INCLUDED IN THE \$167,131 AND EXPLAIN WHY YOU DISAGREE WITH**
19 **CRANE'S ADJUSTMENT TO REMOVE ALLOCATION OF CORPORATE**
20 **SERVICE COMPANY COSTS?**

21 **A.** The \$167,131 consists of allocated costs, specifically salary and wages,
22 necessary for the provision of safe and reliable water services. Here is a detailed

1 breakout of the \$167,131, which was provided to Ms. Crane during the course of
2 discovery:

Department	Allocated Salary
Accounting	\$ 18,094
Accounts Payable	11,075
Billing	4,352
Clerical	2,602
Executive	38,180
Finance	11,913
HR, Admin & Payroll	19,150
IT	12,608
Legal	10,241
Operations and safety	2,736
Regulatory Accounting	29,914
Tax	6,266
Total	\$ 167,131

3
4 As stated by Ms. Crane, undoubtedly some costs being allocated to Water
5 Service Corporation of Kentucky (“WSCK”) are necessary for the provision of
6 safe and reliable water service; however, she has removed all of these costs.
7 These costs are allocated from Water Service Corporation (“WSC”) to WSCK
8 and are necessary to safe and reliable utility service. Without these services,
9 WSCK could not operate as a utility. For example, if WSCK did not have the
10 ability to pay vendors through the Accounts Payable Department, vendors would
11 not be paid for their services and would ultimately stop providing services to
12 WSCK. WSC allocated \$11,075 for these services to WSCK. If WSCK were to
13 hire its own Accounts Payable clerk, it would lose out on the benefits of
14 economies of scale available to it through the larger customer base of WSC. The
15 ultimate cost would be greater than \$11,075, which would ultimately lead to

1 increased rates to customers. Another example would be Billing. WSCK was
2 allocated \$4,352 for payroll costs related to Billing. I am bewildered that Ms.
3 Crane would suggest that a utility company paying Billing personnel \$4,352 is
4 unreasonable. If WSC did not provide billing services, WSCK customers would
5 not receive a monthly bill and most likely not pay their bills, because the
6 customers would have no idea how much they owe or where to send their
7 payments. If WSCK did not provide billing services, WSCK would be required to
8 hire its own billing staff at a cost more than \$4,352. Without this revenue, WSCK
9 would not be able to meet its obligations as they came due and WSCK was a
10 stand-alone company, it would most likely be insolvent. The tax service provided
11 by WSC to WSCK is a third example. Without a tax professional, WSCK would
12 not be able to prepare its tax return or pay its income taxes. In fact, each of the
13 components of the allocated salaries from WSC to WSCK presents similar
14 circumstances. WSCK receives services from WSC at a cost less than what they
15 would be required to pay if WSCK was a stand-alone company. The \$167,131 is
16 an essential part of the utility and without these services, WSCK would not be
17 able to exist.

18
19 **Q. MR. LUBERTOZZI, ARE YOU SAYING THAT THE ENTIRE \$167,131 WAS**
20 **REASONABLE AND SHOULD BE RECOVERED THROUGH RATES?**

21 **A.** Absolutely, yes. There is no evidence to show that these costs were either
22 unreasonable or not necessary to provide safe and reliable water service. In fact,
23 the opposite is true. Ms. Crane indicated in her direct testimony that undoubtedly

1 some costs being allocated to WSCK that are necessary for the provision of safe
2 and reliable water service. However, instead of performing any real analysis, Ms.
3 Crane simply removes all the expenses in question. The \$167,131 was
4 prudently incurred and necessary to provide safe and reliable water service to
5 WSCK's customers. Therefore, any removal of these costs based on Ms.
6 Crane's assertions is inconsistent with standard regulatory practice.

7
8 **Q. MR. LUBERTOZZI, ARE YOU AWARE OF ANY CASES WHERE MS.**
9 **TESTIFIED WHEREIN SHE REVIEWED WSC'S ALLCOATED SALARIES AND**
10 **INCLUDED THEM FOR RATEMAKING AS A COMPONENT OF THE**
11 **REVENUE REQUIREMENT?**

12 **A.** Yes. In cases WR03121034 and WR03121035 from the State of New Jersey
13 Board of Public Utilities, Ms. Crane testified that salaries cost are allocated from
14 WSC to Utilities, Inc.'s operating subsidiaries based on a customer to each
15 subsidiary receiving services, which is consistent with WSC's current practice. A
16 copy of Ms. Crane's direct testimony is attached as Appendix A hereto.

17
18 **Q. IN THESE DOCKETS DID MS. CRANE RECOMMEND THAT TEST YEAR**
19 **ALLOCATED SALARY EXPENSE FROM WSC BE INCLUDED AS A**
20 **COMPONENT OF COST OF SERVICE?**

21 **A.** Yes, in Schedule ACC-9W Ms. Crane included salary expense allocated from
22 WSC to the operating subsidiary receiving the benefit.

1 **Q. PLEASE EXPLAIN WHY YOU DISAGREE WITH WITNESS CRANE'S**
2 **ADJSUTMENT TO REMOVE ALL OF PROJECT PHOENIX.**

3 **A.** Yes. Project Phoenix is in service, dedicated to utility service, and provides a
4 benefit to WSCK ratepayers. Not allowing WSCK recovery of an asset that is in
5 service and provides a benefit to ratepayers is tantamount to a taking. Ms.
6 Crane partially relies upon the fact that WSCK did not rely upon external
7 benchmark; however, it is unclear to me if this test has been applied to all of
8 WSCK's assets provided services or just Project Phoenix. In fact, I am unaware
9 of any other utility in Kentucky held to such a standard. All of WSCK's customers
10 receive their monthly bill from the billing system, which is part of Project Phoenix.
11 All of WSCK's vendors are paid through the accounting system, which is part of
12 Project Phoenix. All of WSCK's tax returns are prepared with reports that are
13 generated from the accounting system, which is part of Project Phoenix. All of
14 reports generated in the case and provided through the course of discovery
15 came from Project Phoenix. I could go on and on about the benefits of Project
16 Phoenix, but Project Phoenix is an integral part of WSCK and without Project
17 Phoenix WSCK could not continue to operate. Moreover, the reports generated
18 and provided to the Attorney General's witness came directly from the accounting
19 and billing system, Project Phoenix, that Ms. Crane thinks should be eliminated
20 for the ratepayers' cost of service. Ms. Crane recommends excluding Project
21 Phoenix but she and the ratepayers both clearly derive a benefit from Project
22 Phoenix.

23

1 **Q. HOW HAS PROJECT PHOENIX BEEN TREATED IN OTHER JURISDICTIONS**
2 **WHEREIN WSCK'S SISTER COMPANY'S OPERATE?**

3 **A.** Costs related to Project Phoenix have been included as a part of cost of service
4 for every Utilities, Inc., operating subsidiary that had a rate case since Project
5 Phoenix went live. This includes Arizona, Florida, Georgia, Illinois, Indiana,
6 Louisiana, Maryland, North Carolina, Nevada, New Jersey, Pennsylvania, South
7 Carolina and Virginia. To date, WSCK ratepayers have not paid one cent for
8 Project Phoenix. WSCK customers have received the benefits of Project
9 Phoenix but to date have not paid for this service. There can be no argument
10 that Project Phoenix is an integral and necessary part of WSCK's utility service
11 and consistent with every other jurisdiction wherein Utilities, Inc., operates costs
12 related to Project Phoenix and allocated salaries must be included for
13 ratemaking.

14

15 **Q. DO YOU HAVE ANY CLOSING COMMENTS?**

16 **A.** Yes, I do. In the past five years, excluding 2013 because UI's audit was just
17 recently finalized, WSCK has spent over one million dollars on capital
18 improvements but had a net loss over the same time frame. In order for WSCK
19 to operate as a healthy viable utility, WSCK must receive adequate rate relief,
20 which includes full recovery of Project Phoenix expenses and allocated
21 expenses.

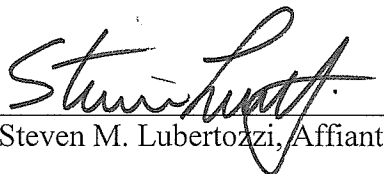
22

23 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY AT THIS TIME?**

1 **A.** Yes, it does.

AFFIDAVIT

The undersigned, Steven M. Lubertozi, being duly sworn, deposes and says that he is the President of Water Service Corporation of Kentucky and that he is authorized to submit this testimony on behalf of Water Service Corporation of Kentucky, and that the information contained in the testimony is true and accurate to the best of his knowledge, information and belief, after reasonable inquiry, and as to those matters that are based on information provided to him, he believes to be true and correct.



Steven M. Lubertozi, Affiant

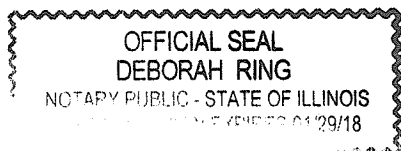
NOTARY CERTIFICATE


STATE OF ILLINOIS

COUNTY OF COOK

Subscribed, acknowledged and sworn to before me by Steven M. Lubertozi on this 21 day of March, 2014.

My commission expires: 1/29/18.





NOTARY PUBLIC

**BEFORE THE STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES
OFFICE OF ADMINISTRATIVE LAW**

**IN THE MATTER OF THE)
PETITION OF MONTAGUE) BPU Docket Nos. WR03121034 (W)
WATER AND SEWER COMPANIES) WR03121035 (S)
FOR AN INCREASE IN RATES FOR) OAL Docket No. PUCRA 01351-2004N
WATER AND SEWER SERVICE)
AND FOR A PHASE II INCREASE)
IN RATES FOR SEWER SERVICE)**

**DIRECT TESTIMONY AND EXHIBITS OF ANDREA C. CRANE
ON BEHALF OF THE
NEW JERSEY DIVISION OF THE RATEPAYER ADVOCATE**

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1 **I. STATEMENT OF QUALIFICATIONS**

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

3 A. My name is Andrea C. Crane and my business address is 38C Grove Street, Ridgefield,
4 Connecticut 06877.

5
6 **Q. By whom are you employed and in what capacity?**

7 A. I am Vice President of The Columbia Group, Inc., a financial consulting firm that
8 specializes in utility regulation. In this capacity, I analyze rate filings, prepare expert
9 testimony, and undertake various studies relating to utility rates and regulatory policy. I
10 have held several positions of increasing responsibility since I joined The Columbia
11 Group, Inc. in January 1989.

12
13 **Q. Please summarize your professional experience in the utility industry.**

14 A. Prior to my association with The Columbia Group, Inc., I held the position of Economic
15 Policy and Analysis Staff Manager for GTE Service Corporation, from December 1987 to
16 January 1989. From June 1982 to September 1987, I was employed by various Bell
17 Atlantic subsidiaries. While at Bell Atlantic, I held assignments in the Product
18 Management, Treasury, and Regulatory Departments.

19
20 **Q. Have you previously testified in regulatory proceedings?**

21 A. Yes, since joining The Columbia Group, Inc., I have testified in approximately 170
22 regulatory proceedings in the states of Arizona, Arkansas, Connecticut, Delaware,

1 Hawaii, Kansas, Maryland, New Jersey, New Mexico, New York, Oklahoma,
2 Pennsylvania, Rhode Island, South Carolina, Vermont, West Virginia and the District of
3 Columbia. These proceedings involved water, wastewater, gas, electric, telephone, solid
4 waste, cable television, and navigation utilities. A list of dockets in which I have filed
5 testimony is included in Appendix A.
6

7 **Q. What is your educational background?**

8 A. I received a Masters degree in Business Administration, with a concentration in Finance,
9 from Temple University in Philadelphia, Pennsylvania. My undergraduate degree is a
10 B.A. in Chemistry from Temple University.
11

12 **II. PURPOSE OF TESTIMONY**

13 **Q. What is the purpose of your testimony?**

14 A. On or about December 31, 2003, Montague Water Company filed a Petition requesting an
15 increase of \$80,315 or 29.8% in its rates for water service. At the same time, Montague
16 Sewer Company filed a Petition requesting an increase of \$275,212 or 265% in its rates
17 for sewer service¹. In addition, Montague Sewer Company filed for a Phase II rate
18 increase in the amount of \$66,945, which it proposed to put into effect after certain
19 capital projects relating to repair and/or replacement of several of the Company's
20 subsurface wastewater disposal beds are completed. The Company subsequently updated

¹ The Term "Company" will be used to refer to both Montague Water Company and Montague Sewer Company, both collectively and individually.

1 its filings to correct an error in its originally filed rate base calculation and to reflect
2 actual results for the twelve months ending December 31, 2003. In those updates,
3 Montague revised its water request from \$80,315 to \$161,880 and its sewer request from
4 \$275,212 to \$281,387.

5 The Columbia Group, Inc. was engaged by The State of New Jersey, Division of
6 the Ratepayer Advocate ("Ratepayer Advocate") to review the Company's Petitions and
7 to provide recommendations to the New Jersey Board of Public Utilities ("BPU" or
8 "Board") regarding the Company's revenue requirement, cost of capital, and rate design.
9 In order to develop my recommendations, I reviewed the prefiled testimony and exhibits
10 of the Company, the responses to data requests propounded upon the Company by the
11 Ratepayer Advocate and by the Staff of the BPU, and certain information from the
12 Company's last base rate case, which was litigated in 1999. I have also relied upon the
13 engineering testimony being submitted on behalf of the Ratepayer Advocate by Howard J.
14 Woods, Jr.

15
16 **III. SUMMARY OF CONCLUSIONS**

17 **Q. What are your conclusions concerning the Company's pro forma income, rate base,**
18 **and revenue requirement?**

19 **A.** Based on my analysis of the Company's filing and other documentation in this case, my
20 conclusions are as follows:

- 21 1. The twelve months ending December 31, 2003 is an appropriate Test Year in this
22 case.

- 1 2. Based on the Discounted Cash Flow Model (“DCF”), the Company has a cost of
2 equity of 9.0% (see Schedules ACC-3W and ACC-3S).
- 3 3. The Company has an overall required rate of return of 7.98% (see Schedules
4 ACC-3W and ACC-3S).
- 5 4. The Company’s water utility has pro forma operating income at present rates of
6 \$30,808 (see Schedule ACC-4W). The Company’s sewer utility has pro forma
7 operating income at present rates of \$11,090 (see Schedule ACC-4S).
- 8 5. Based on these determinations, the Company’s water utility currently has a
9 revenue requirement deficiency of \$24,318. This is in contrast to the revenue
10 deficiency of \$161,880 claimed by the Company (see Schedule ACC-1W).
- 11 6. Sludge hauling costs incurred as a result of the failure of leaching beds 3A and 3B
12 should be deferred.
- 13 7. Capital costs associated with repair and replacement of certain leaching beds, as
14 well as amortization of deferred sludge hauling costs, should be recovered through
15 a rate increase in the sewer utility once the final costs associated with correction
16 of these problems are known and after the capital projects necessary to rectify the
17 problems are completed.
- 18 8. The amount of any Phase II increase in the sewer utility should not be approved
19 until all costs associated with correction of leaching beds problems are known and
20 the parties have had an opportunity to review the actual costs associated with
21 corrective action.
- 2 9. Based on my analysis, the Company’s sewer utility has a revenue deficiency at

1 present rates of \$6,938. This is in contrast to the revenue deficiency of \$281,387
2 claimed by Montague.

3 10. The Company's request for an across-the-board increase of any rate increase
4 granted by the BPU is reasonable.

5 11. This testimony may be updated based upon my review of outstanding discovery
6 responses or as a result of additional issues being identified during the hearing
7 phase of this case.
8

9 **IV. OVERALL RATE OF RETURN**

10 **Q. What is the cost of capital and capital structure that the Company is requesting in
11 this case?**

12 **A. The Company has utilized the following capital structure and cost of capital:**
13

	Percent	Cost	Weighted Cost
14 Long Term Debt	59.23%	7.28%	4.31%
15 Common Equity	40.77%	9.76%	<u>3.97%</u>
16 Total			<u>8.28%</u>

17
18
19

20 **Q. Are you recommending any adjustments to the Company's proposed capital
21 structure?**

22 **A. No, I am not. The decision as to how to capitalize Montague is made by its parent**

1 company, Utilities, Inc. Utilities, Inc. has generally capitalized Montague with equity
2 capital. Accordingly, it would not be appropriate to utilize the actual capital structure of
3 the Company when determining its required operating income. In its Petitions, the
4 Company has used the consolidated capital structure of its parent, Utilities, Inc., as the
5 pro forma capital structure for both the water and sewer utilities. The resulting capital
6 structure is within the range of reasonableness for capital structures that are typically used
7 by water utilities. Accordingly, I am not recommending any revisions to the capital
8 structure proposed by Montague.

9
10 **Q. Are you recommending any adjustments to the Company's proposed cost of equity?**

11 A. Yes, I am recommending an adjustment to the Company's proposed cost of equity.

12
13 **Q. What cost of equity are you recommending in this case?**

14 A. As shown on Schedules ACC-3W and ACC-3S, I am recommending a cost of equity of
15 9.0%. My recommendation is based upon a discounted cash flow ("DCF") analysis. This
16 is the most frequently used method to determine an appropriate return on equity for a
17 regulated utility. The DCF methodology equates a utility's return on equity to the
18 expected dividend yield plus expected future growth for comparable investments.
19 Specifically, this methodology is based on the following formula:

$$\text{Return on Equity} = \frac{D_1}{P_0} + g$$

1 where "D₁" is the expected dividend, "P₀" is the current stock price, and "g" is the
2 expected growth in dividends.

3 In order to determine a comparable group of companies, I utilized the water
4 companies followed by the Value Line Investment Survey. To determine an appropriate
5 dividend yield for comparable companies, i.e., the expected dividend divided by the
6 current price, I calculated the dividend yield of each of the comparable companies under
7 two scenarios. First, I calculated the dividend yield using the average of the stock prices
8 for each company over the past six months. The use of a dividend yield using a six-
9 month average price mitigates the effect of stock price volatility for any given day. Based
10 on the average stock prices over the past six-months, and the current dividend for each
11 company, I determined an average dividend yield for the comparable group of 2.98%. I
12 also calculated the current dividend yield at May 10, 2004, which showed an average
13 dividend yield for the comparable group of 3.13%. Finally, I examined the average
14 dividend yields for water utilities as reported in the May 2004, C.A. Turner Utilities
15 Reports, which showed an average dividend yield for water utilities of 2.9%. Based on
16 all of this data, I recommend that a dividend yield of 3.0% be used in the DCF
17 calculation.

18
19 **Q. What growth rate did you utilize for Montague?**

20 **A.** The actual growth rate used in the DCF analysis is the dividend growth rate. In spite of
21 the fact that the model is based on dividend growth, it is not uncommon for analysts to
22 examine several growth factors, including growth in earnings, dividends, and book value.

1 Following are the five-year historic growth rates for the companies included in my
 2 comparable group, as well as projected growth rates, based on publicly available
 3 documents:
 4

	Five Year Historic Earnings	Five Year Historic Dividends	Five Year Historic Book Value	Five Year Projected Earnings	Five Year Projected Dividends	Five Year Projected Book Value
American States Water Co.	1.5%	1.0%	4.0%	9.5%	1.5%	4.0%
Aqua America Water Company	9.5%	6.0%	9.5%	9.5%	7.0%	11.5%
California Water Company	(6.5%)	1.0%	1.0%	11.0%	1.0%	14.5%
Connecticut Water Company	2.5%	1.0%	3.5%	NA	NA	NA
Middlesex Water Company	-0.5%	2.5%	3.5%	7.00%	NA	NA
SJW Corporation	-0.5%	4.0%	4.0%	NA	NA	NA
Southwest Water Corporation	15.5%	10.5%	11.5%	9.00%	NA	NA
York Water Company	NA	NA	NA	7.00%	NA	NA
Average	6.8%	3.2%	5.3%	8.83%	3.16%	10.0%

5
 6 With regard to longer-term historic growth rates, Value Line only reports these
 7 growth rates for American States Water Company, Aqua America, and California Water
 8 Company. As shown below, the longer-term ten-year growth rates are generally below
 9 the five-year growth rates for the companies followed by Value Line:

1 Ten Year Earnings Growth 4.0%

2 Ten Year Dividend Growth 2.8%

3 Ten Year Book Value Growth 5.0%

4
5 **Q. Why do you believe that it is reasonable to examine historic growth rates as well as**
6 **projected growth rates when evaluating a utility's cost of equity?**

7 A. I believe that historic growth rates should be considered because security analysts have
8 been notoriously optimistic in forecasting future growth in earnings. At least part of this
9 problem in the past has been the fact that firms that traditionally sell securities are the
10 same firms that provide investors with research on these securities, including forecasts of
11 earnings growth. This results in a direct conflict of interest since it has traditionally been
12 in the best interest of securities firms to provide optimistic earnings forecasts in the hope
13 of selling more stock. As a result of this practice, the Wall Street investment firms agreed
14 to a \$1.4 billion settlement with securities regulators in a settlement announced last year.
15 Pursuant to that settlement, ten major Wall Street law firms agreed to pay \$1.4 billion to
16 investigating state regulators and the United States Securities and Exchange Commission
17 ("SEC"). Approximately \$900 million of this amount constituted fines. The remainder
18 was earmarked for various education and independent research activities. In addition,
19 firms were required to sever the links between their stock research activities and their
20 investment banking activities. Therefore, earnings growth forecasts should be analyzed
21 cautiously by state regulatory commissions.

1 **Q. Based upon your review, what growth rate do you recommend be utilized in the**
2 **DCF calculation?**

3 A. Based on my review of this data, I believe that a growth rate of no greater than 6.0%
4 should be utilized. This growth rate is higher than the actual growth rates over the past
5 five years in dividends or book value. It is also higher than the ten-year growth rate in
6 earnings, dividends, or book value. Moreover, it is higher than the projected growth rate
7 for dividends, which is the growth rate that is reflected in the traditional DCF formula.
8 While the average projected growth rate in earnings and book value are higher than my
9 recommended growth rate, I have already discussed the fact that projected growth rates,
10 particularly in earnings, tend to be overly optimistic.

11
12 **Q. What are the results of your analysis?**

13 A. My analysis indicates a cost of equity using the DCF methodology of 9.00%, as shown
14 below:

15	Dividend Yield	3.00%
16	Expected Growth	<u>6.00%</u>
17	Total	9.00%

18
19 **Q. What is the overall cost of capital that you are recommending?**

20 A. Given the capital structure proposed by Montague, the Company's overall debt cost of
21 7.28%, and a cost of equity of 9.0%, I am recommending an overall cost of capital of
22 7.98%.

1 V. TEST YEAR

2 Q. **What Test Year did the Company select on which to file its case in this proceeding?**

3 A. The Company selected the Test Year ending December 31, 2003. In addition, the
4 Company proposed certain post-test year, rate base adjustments relating to capital
5 projects projected to be in service by June 30, 2004. As filed, the Company's Test Year
6 contained six months of actual results and six months of projected results. The Company
7 subsequently updated its Petitions to reflect actual results for the full Test Year.

8
9 Q. **Was the period ending December 31, 2003 abnormal in any way?**

10 A. Yes, it was. As discussed in the testimony of Mr. Sharp, in January 2003, the Company
11 began to experience serious surface ponding in fields 3A and 3B of its sewer system. The
12 New Jersey Department of Environmental Protection ("DEP") issued an order requiring
13 Montague to haul away 100% of the incoming flows from fields 3A and 3B. The NJDEP
14 subsequently agreed to permit the Company to discharge about 10,000 gpd to the fields.
15 The remaining 20,000 gpd are being hauled away.

16 The Company and DEP are in discussions and negotiations regarding a longer-
17 term solution to the problems encountered in fields 3A and 3B. The Company has
18 proposed a Phase II rate increase for its sewer operation to reflect capital improvements
19 that will be necessary to repair and/or replace these fields. With regard to operating
20 expenses, the Company is proposing that the non-recurring hauling costs that it incurred
21 in the Test Year, as well as costs that will be incurred in 2004 until the problems at fields
22 3A and 3B are corrected, be amortized over a three-year period. These proposals will be

1 discussed later in this testimony.

2

3 **Q. Given the non-recurring expenses that occurred during calendar year 2003, do you**
4 **believe that the twelve months ending December 31, 2003 is a reasonable Test Year**
5 **to use in this case?**

6 A. Yes, I do. Provided that appropriate adjustments are made to reflect the proper
7 ratemaking treatment for these non-recurring hauling costs, then the twelve months
8 ending December 31, 2003 can be modified to reflect an appropriate Test Year in this
9 case. In addition to the costs associated with the failure of fields 3A and 3B, there are a
10 few other normalization adjustments that I am recommending to Test Year expenses.
11 However, it is normal and customary to make such normalization adjustments and in fact
12 such adjustments are routinely made regardless of the Test Year used in regulatory
13 proceedings. Therefore, I have accepted the twelve months ending December 31, 2003,
14 as adjusted, as a reasonable Test Year in this case.

15

1 **VI. RATE BASE ISSUES**

2
3 **A. Utility Plant in Service**

4 **Q. How did the Company determine its utility plant in service claim in this case?**

5 A. As shown on Exhibit P-4 to the Company's filing, the Company included in rate base its
6 net utility plant at December 31, 2003, plus post-test year additions through June 30,
7 2004. The Company included post-test year additions of \$97,777 for its water utility and
8 of \$35,435 for its sewer utility. In addition, the Company is requesting recovery of
9 capital additions of \$525,000 for the Phase II increase proposed for the sewer utility.

10 The post-test year water utility additions include \$85,277 for two water main
11 extensions, \$5,000 for a road to its water plant, and \$7,500 to replace two fire hydrants
12 and four meter pits. The post-test year sewer plant addition proposed for Phase I amounts
13 to \$35,435 in engineering related to leach fields 3A and 3B. The Phase II projects that
14 the Company is proposing include \$375,000 for repair/replacement of leach fields 3A and
15 3B and \$150,000 for anticipated repairs to leach field 2.

16
17 **Q. Are you recommending any adjustment to the utility plant in service additions being
18 claimed by Montague?**

19 A. Yes, I am recommending that the BPU deny post-test year additions proposed by the
20 Company. The Company did not update its depreciation reserve to reflect additional
21 depreciation expense through June 30, 2004. Nor did it update other components of its
22 rate base claim such as contributions in aid of construction. Moreover, the Company did

1 not include any incremental revenue from new customers that may be added after
2 December 31, 2003. Permitting the Company to include post-test year plant while
3 ignoring the other elements of the regulatory triad creates a mismatch in Montague's
4 revenue requirement calculation.

5
6 **Q. Hasn't the BPU permitted certain post-test year adjustments to be reflected in rate
7 base in the past?**

8 A. I recognize that the BPU has permitted post-test year adjustments to be included under
9 certain circumstances. As stated in the Board's Decision on Motion for Determination of
10 Test Year and Appropriate Time Period for Adjustments²,

11 With regard to the second issue, that is, the appropriate time period and
12 standard to apply to out-of-period adjustments, the standard that shall be applied and
13 shall govern petitioner's filing and proofs is that which the Board has consistently
14 applied, the "known and measurable" standard. Known and measurable changes to
15 the test year must be (1) prudent and major in nature and consequence, (2) carefully
16 quantified through proofs which (3) manifest convincing reliable data. The Board
17 recognizes that known and measurable changes to the test year, by definition, reflect
18 certain contingencies; but in order to prevail, petitioner must quantify such
19 adjustments by reliable forecasting techniques reflected in the record.
20

21 **Q. Has the Company actually completed any of the post-test year projects that it
22 included in its revenue requirement?**

23 A. According to the Company's response to RAR-26, the only water utility project
24 completed to date is the road to the treatment plant. Moreover, the post-test sewer

²*Decision on Motion for Determination of Test Year and Appropriate Time Period for Adjustments, In Re Elizabethtown Water Company Rate Case, BPU Docket No. WR85040330 (Order Dated May 23, 1985), p. 2.*

1 project relates to engineering work for the leaching fields 3A and 3B project that the
2 Company has included in its Phase II request. Therefore, by definition, the post-test year
3 project included in the Company's sewer claim will not be completed by June 30, 2004.
4

5 **Q. What do you recommend?**

6 A. I recommend that the Company's projected post-test year plant additions be eliminated
7 from its rate base claim. With one exception, these projections have not been completed.
8 Moreover, the Company has not updated either its depreciation reserve claim or its
9 operating revenue claim to reflect any adjustments beyond the end of the Test Year. My
10 adjustment to eliminate the Company's claim for post-test year plant additions is shown
11 in Schedule ACC-5W for the water utility and in Schedule ACC-5S for the sewer utility.
12

13 **Q. If the Company revises its claim and requests the inclusion of construction work in
14 progress ("CWIP") in rate base, given the fact that it does not complete its projected
15 plant additions by June 30, 2004, what would you recommend?**

16 A. In that case, I would recommend that no CWIP be permitted in rate base. I do not believe
17 that CWIP is an appropriate rate base element. Accordingly, I would not recommend the
18 inclusion of any CWIP in rate base. The Company did not request the inclusion of any
19 CWIP in rate base and no CWIP should be permitted due to any failure of Montague to
20 meet its projections for plant in service additions. The Company should not be permitted
21 to include CWIP in rate base simply because it finds that its actual pro forma period plant
22 additions are less than originally forecast.

1 CWIP does not represent facilities that are used or useful in the provision of utility
2 service. In addition, including this plant in rate base violates the regulatory principle of
3 intergenerational equity by requiring current ratepayers to pay a return on plant that is not
4 providing them with utility service and which may never provide current ratepayers with
5 utility service.

6 One of the basic principles of utility ratemaking is that shareholders are entitled to
7 a return on, and to a return of, plant that is used and useful in the provision of safe and
8 adequate utility service. By its definition, CWIP does not meet these criteria. CWIP
9 requires today's ratepayers to pay for projects that may never provide them with any
10 benefit. In addition, allowing CWIP in rate base transfers the risk during project
11 construction from shareholders, where it properly belongs, to ratepayers. For all these
12 reasons, any requests to include CWIP in rate base should be denied.

13
14 **B. Cash Working Capital**

15 **Q. What is cash working capital?**

16 **A.** Cash working capital is the amount of cash that is required by a utility in order to cover
17 cash outflows between the time that revenues are received from customers and the time
18 that expenses must be paid. For example, assume that a utility bills its customers
19 monthly and that it receives monthly revenues approximately 30 days after the midpoint
20 of the date that service is provided. If the Company pays its employees weekly, it will
21 have a need for cash prior to receiving the monthly revenue stream. If, on the other hand,
22 the Company pays its management service fees quarterly, it will receive these revenues

1 well in advance of needing the funds to pay its management service fee expense.

2

3 **Q. Do companies always have a positive cash working capital requirement?**

4 A. No, they do not. The actual amount and timing of cash flows dictate whether or not a
5 utility requires a cash working capital allowance. Therefore, one should examine actual
6 cash flows through a lead/lag study in order to accurately measure a utility's need for cash
7 working capital.

8

9 **Q. How did the Company determine its cash working capital claim?**

10 A. The Company used a formula method, i.e., its cash working capital claim is based on
11 1/8th of its operating expenses, including taxes other than income taxes. This 1/8th
12 formula method is based on the assumption that a utility requires 45 days of cash working
13 capital, i.e., that it will receive its revenues, on average, 45 days after it pays its expenses.

14

15 **Q. Do you believe that the formula method provides an accurate calculation of a
16 utility's cash working capital requirement?**

17 A. No, I do not. The problem with the formula method is that it will always result in a
18 positive cash working capital requirement. The formula method gives no consideration to
19 the actual timing and pattern of cash flows. Therefore, this method can never accurately
20 measure a utility's need for cash working capital. For example, I understand that in a
21 recent base rate case, Middlesex Water Company reported a negative cash working
22 capital requirement. So a utility's cash working capital requirement is not always

1 positive, even though the formula method will always yield a positive result.

2

3 **Q. What other methods can be used to determine a utility's cash working capital**
4 **requirement?**

5 A. The most accurate method, and one that is commonly used, is the lead/lag method. This
6 methodology examines the actual timing and pattern of cash flows by comparing the
7 average revenue lag, which determines how soon after the midpoint of the service period
8 the Company receives its revenues, with the expense lag, which determines how soon
9 after incurring a particular expense, payment on that expense is required to be made.
10 Montague did not provide a lead/lag study in this case.

11

12 **Q. What do you recommend?**

13 A. I recommend that the Company's cash working capital claim be denied. As was recently
14 demonstrated in the Middlesex Water Company case, it is entirely possible for a utility to
15 have a negative cash working capital requirement. Since the Company did not provide a
16 lead/lag study, it has not supported its request for a cash working capital allowance.
17 Accordingly, I recommend that its cash working capital claim be denied. My adjustment
18 is shown in Schedule ACC-6W and in Schedule ACC-6S.

19

20 **C. Consolidated Income Taxes**

21 **Q. Did Montague include a consolidated income tax adjustment in its filing?**

22 A. No, it did not. Montague calculated its test year income tax expense on a "stand-alone"

1 basis. The Company's filing ignored the fact that Montague does not file its federal income
2 taxes on a stand-alone basis, but rather files as part of a consolidated income tax group. By
3 filing a consolidated return, Montague can take advantage of tax losses experienced by other
4 member companies. The tax loss benefits generated by one group member can be shared by
5 the other consolidated group members, resulting in a reduction in the effective federal
6 income tax rate of the Company. These tax savings should be flowed through to the benefit
7 of New Jersey ratepayers.
8

9 **Q. Why should these tax benefits be flowed through to the Company's ratepayers?**

10 A. These tax benefits should be flowed through to ratepayers because these benefits reflect the
11 actual taxes paid. Establishing a revenue requirement based on a stand-alone federal income
12 tax methodology would overstate the Company's expense, result in a windfall to the
13 Company, and result in rates that are higher than necessary.
14

15 **Q. Has this issue been addressed previously by the Board?**

16 A. Yes, this issue has been addressed previously. It is my understanding that the BPU has
17 generally adopted consolidated income tax adjustments based on the "rate base"
18 methodology. This method seeks to compensate ratepayers through a rate base deduction,
19 which is based on the cumulative tax savings resulting from consolidated income tax
20 filings. This methodology treats consolidated tax savings as a source of cost free capital
21 available to the utility.

1 Q. **Have you quantified a consolidated income tax adjustment?**

2 A. Not at this time. In Data Requests SR-14w and SR-14s, the Company was asked to
3 provide its federal income tax returns for 2001, 2002, and 2003 (when available). The
4 Company responded that "Petitioners do not file separate income tax returns." Moreover,
5 Montague did not provide a copy of its consolidated returns. Therefore, at this time we
6 do not know if there were any operating losses that should be used as a rate base offset in
7 this case. However, to the extent that such losses have occurred, resulting in a lower
8 effective tax rate for Montague, Montague's share of these cumulative losses should be
9 reflected as a rate base deduction.

10
11 **D. Summary of Rate Base Issues**

12 Q. **What is the impact of your rate base adjustments?**

13 A. My recommended adjustments reduce the Company's water utility rate base claim from
14 \$690,141 to \$555,994 as summarized on Schedule ACC-2W. My recommended
15 adjustments reduce the Company's sewer utility rate base claim from \$260,914 to
16 \$187,540, as shown on Schedule ACC-2S.

1 VII. OPERATING INCOME ISSUES

2

3 A. Pro Forma Revenue

4 Q. How did the Company develop its pro forma revenue claim in this case?

5 A. The Company used its actual Test Year operating revenue for both its water and sewer
6 utilities as its pro forma operating revenue at present rates.

7

8 Q. Are you recommending any adjustments to the Company's claim?

9 A. I am recommending one revenue adjustment to the Company's water utility claim. As
10 shown in the response to RAR-3, residential sales have fluctuated in each of the past three
11 years. Moreover, a review of the response to RAR-E-2, indicates that the summer of
12 2003 was relatively wet. Water consumption, particularly residential consumption, tends
13 to vary from year-to-year based on a number of factors, particularly rainfall and
14 temperature conditions. Therefore, it is likely that the Company's operating revenues for
15 its water utility were somewhat depressed in the Test Year given wetter than normal
16 conditions.

17

18 Q. Ideally, how should a water utility's operating revenue at present rates be
19 calculated?

20 A. The most accurate method is to calculate an average consumption over a multi-year
21 period, and then to apply that consumption to the pro forma number of customers.

22 Several of the water utilities in New Jersey file their rate case requests using an average

consumption over a multi-year period. Unfortunately, as of the preparation date of this testimony, we do not have the information necessary to undertake this analysis. In addition, I understand that at least some of the customer count information that was provided in response to RAR-2 has been misclassified. Therefore, at this time, we do not have accurate data on customer growth during the Test Year.

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7 **Q. Given the fact that certain information has not been provided by Montague, what**
8 **do you recommend?**

9 A. In the absence of accurate consumption and customer count data, I recommend that
10 residential operating revenues be normalized by averaging the actual residential revenues
11 in 2001, 2002, and 2003. Since the second phase of the Company's last water rate
12 increase went into effect in 2000, there were no rate changes during the last three years
13 and therefore the revenue fluctuations during that time reflect only changes in customers
14 and/or consumption. Using the average of the last three years will tend to understate the
15 actual pro forma revenue at present rates, since it will not reflect changes in customer
16 counts that occurred during this time. However, even though this method is likely to
17 understate pro forma revenue, it is still a more accurate method for determining a
18 normalized usage level than the Company's proposal to use the actual Test Year results.
19 My adjustment to water utility revenue is shown in Schedule ACC-7W.
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Q. In quantifying the impact of your revenue adjustment, did you make an allowance for the additional uncollectible expense and gross receipts and franchise tax (“GR&FT”) expense that will be incurred as a result of receiving additional revenues?

A. Yes, I did. As shown on Schedule ACC-7W, I have included in my adjustment the impact of both incremental uncollectible expense and additional GR&FT payments that will result from my adjustment. Since I am recommending an adjustment that will increase the Company’s pro forma revenue at present rates, Montague will incur additional uncollectible expense and additional GR&FT expense on these additional revenues. I have accounted for both of these additional costs in Schedule ACC-7W. In addition, these additional costs are also included in my income statement shown in Schedule ACC-20W.

Q. Will Montague also incur incremental chemical and power costs as a result of increased sales?

A. Given the relatively small size of my pro forma revenue adjustment, I do not know if the Company is likely to incur additional chemical or power costs. However, to avoid any controversy in this area, I have included an incremental cost adjustment in the calculation shown in Schedule ACC-7W. In that schedule, I have reduced the impact of the Company’s additional sales on Montague’s operating income by including additional costs that may be incurred for relating to chemicals and power costs.

1
2 **Q. Are you recommending a similar operating revenue adjustment to sewer utility**
3 **revenues?**

4 A. No, I am not. The Company bills for sewer service on a flat rate basis. Therefore,
5 changes in weather conditions do not affect the Company's sewer revenues. Accordingly,
6 I am not recommending any adjustment to the Company's claim for pro forma sewer
7 revenues.

8
9 **B. Maintenance and Repair Expense**

10 **Q. Please discuss the Company's claim for maintenance and repair expense.**

11 A. The vast majority of these costs relate to sludge hauling costs incurred by the Company
12 during the Test Year. This issue is being sponsored by Mr. Woods and therefore I will
13 provide just a brief overview of the Company's claim. As previously stated, since
14 January 2003, Montague has been incurring sludge hauling costs as a result of failures at
15 leach fields 3A and 3B. The Company is proposing that the sludge hauling costs incurred
16 between the beginning of the Test Year and June 30, 2004, be amortized over a three-year
17 period. It has included such an amortization in its Phase I revenue requirement claim.

18 In addition, Montague is requesting that capital costs associated with correcting
19 the problems at leach fields 3A and 3B, as well as certain costs relating to corrective
20 action at leach field 2, be recovered through a Phase II increase once these projects are
21 completed.

22 As discussed in Mr. Woods's Testimony, the Ratepayer Advocate is

1 recommending that sludge hauling costs be deferred, and amortized over a 20-year period
2 once the corrective action has been completed and the hauling activities terminated. Mr.
3 Woods is recommending a normalized, prospective level of maintenance and repair costs
4 amounting to \$21,932. Therefore, at Schedule ACC-7S, I have made an adjustment to
5 reduce the Company's maintenance and repair costs to the level recommended by Mr.
6 Woods.

7
8 **C. Salaries and Wages**

9 **Q. How did the Company determine its payroll expense claim?**

10 A. It should be noted that the vast majority of payroll expenses incurred by Montague are
11 allocations based on customer equivalents. Montague has only one dedicated employee.
12 The remaining employees, both operational and administrative, perform work on behalf
13 of one or more subsidiaries of Utilities, Inc. and their costs are allocated to benefiting
14 subsidiaries based on the number of customer equivalents at each subsidiary receiving
15 services.

16 According to page 5, lines 32-34 of Ms. Weeks' testimony, "Wage and salary
17 expense has been adjusted to reflect actual staffing and anticipated merit increases of 3%.
18 The total cost is split between water and sewer based on the number of customers." In
19 addition to allocating salary and wage costs between sewer and water utilities, the
20 Company also reports salaries separately for "Maintenance" and for "General" cost
21 categories. In its filing, Montague is proposing adjustments to increase its actual Test
22 Year Maintenance salary expense by 24.7% and its General salary expense by 36.9%, in

1 both the water and sewer utilities.

2

3 **Q. Has the Company adequately supported these increases?**

4 A. No, it has not. The Company provided an original workpaper showing the development
5 of its salary and wage claim, but it did not identify the specific changes to its Test Year
6 actual results that resulted in the significant increases being requested. It later updated
7 this workpaper, increasing its salary and wage claim by over 10% from the amounts
8 contained in its original filing³. However, it still has not justified the magnitude of the
9 increases over the Test Year actual results that are being requested in this case. The
10 Company has not provided any documentation to show why its pro forma payroll costs
11 should exceed its Test Year actual costs by significantly more than the 3% annual
12 increase discussed in Ms. Weeks' testimony. In addition, both of the workpapers that
13 have been provided by Montague contain costs for an individual that the Company claims
14 no longer works for Montague, as reported in the response to RAR-12. Therefore, at this
15 time, Montague has not adequately supported the pro forma adjustments that it is
16 proposing to its Test Year salary and wage expense.

17

18 **Q. What do you recommend?**

19 A. Given the lack of supporting detail provided by the Company, I recommend that
20 Montague's salary and wage claim be limited to the 3% increase discussed in Ms. Weeks'

³ The details of this workpaper are confidential and therefore I will not address salary information for specific employees.

1 testimony. My adjustments relating to Maintenance salaries are shown in Schedules
2 ACC-8W and ACC-8S for the water and sewer utilities respectively. My adjustments
3 relating to General salaries are shown in Schedules ACC-9W and ACC-9S for the water
4 and sewer utilities. Additional amounts should be not approved unless the Company can
5 demonstrate the specific factors that caused the increase and can demonstrate that any
6 additional personnel or changes in cost allocation are reasonable.
7

8 **Q. Have you also made an adjustment to the Company's payroll tax expense claim?**

9 A. Yes, I have made an adjustment to eliminate the payroll taxes associated with the salary
10 and wage costs I recommend be disallowed. In quantifying my adjustment, I applied the
11 social security and medicare tax rate of 7.65% to my recommended salary and wage
12 disallowance in order to quantify the impact on payroll tax expense. My adjustment is
13 shown in Schedule ACC-10W for the water utility and in Schedule ACC-10S for the
14 sewer utility.
15

16 **D. Retirement Benefit Costs**

17 **Q. How did the Company develop its claim for retirement benefits?**

18 A. In addition to health benefits, Montague also provides retirement benefits including a
19 pension plan and a 401(K) plan. The Company has included pension costs of 3% of its
20 salary and wage claim. In addition, it has included 401(K) costs of 4% of its salary and
21 wage claim.

1

2 **Q. Are you recommending any adjustment to the Company's retirement benefit cost**
3 **claims?**

4 A. Yes, since I am recommending an adjustment to the Company's salary and wage claim, it
5 is necessary to make a corresponding adjustment to reduce Montague's pension and
6 401(K) costs. Therefore, I have reduced the Company's pension expense claim by 3% of
7 my recommended salary and wage adjustment. I have also reduced its 401(K) cost claim
8 by 4% of my salary and wage adjustment. My adjustments to retirement benefit costs are
9 shown in Schedule ACC-11W and Schedule ACC-11S for the water utility and sewer
10 utility respectively.

11

12 **E. Regulatory Commission Expenses**

13 **Q. How did the Company develop its rate case expense claim?**

14 A. The Company calculated its regulatory commission expense claim by first estimating
15 costs for the current rate case of \$157,481. These costs were then amortized over a three-
16 year period, for an annual expense of \$52,494. This annual expense was then allocated
17 between water and sewer operations based on the number of customers served by each
18 utility. Finally, the Company added the unrecovered rate case cost from its last rate case
19 to its rate case expense claim in this case.

20

21 **Q. Are you proposing any adjustments to the Company's claim?**

22 A. Yes, I am proposing two adjustments. First, with regard to the present case, I recommend

1 that rate case costs be shared equally between ratepayers and shareholders. The BPU has
2 a long standing policy of requiring regulatory commission expenses to be shared 50/50
3 between ratepayers and shareholders. The purpose of this sharing requirement is to
4 recognize that shareholders, as well as ratepayers, benefit from the filing by the utility of
5 a rate case proceeding and therefore they should share in the associated costs. Montague
6 has not reflected any sharing of regulatory commission expenses in its revenue
7 requirement. My regulatory expense adjustments are shown on Schedules ACC-12W for
8 the water utility and on Schedule ACC-12S for the sewer utility.

9
10 **Q. What is your second adjustment?**

11 A. I recommend that the Company's attempt to recover past rate case costs for Docket Nos.
12 WR981011161-62 through prospective rates be denied. The Company's last base rate
13 case was resolved by stipulation. That stipulation is silent with regard to the treatment of
14 rate case costs. Therefore, it does not appear that any specific amortization period was
15 agreed upon for recovery of the Company's rate case costs. Accordingly, the Company's
16 attempt to recover certain costs relating to its prior case in the current filings constitutes
17 retroactive ratemaking and should be rejected by the Commission. At Schedule ACC-
18 12W and Schedule ACC-12S, I have eliminated all costs relating to the prior rate case
19 from my pro forma regulatory commission expense allowance.

20
21 **F. Outside Services**

22 **Q. What has been the Company's history with regard to outside services expenses?**

1 A. The Company's outside services expenses were relatively stable from 2001-2002 in both
2 its water and sewer utilities. However, these expenses increased significantly in 2003, the
3 Test Year in this case, as shown below:
4
5

<u>Outside Services</u>	<u>Water Utility</u>	<u>Sewer Utility</u>
2000	\$12,850	\$5,067
2001	\$ 4,515	\$1,780
2002	\$ 7,123	\$2,809
2003	\$25,671	\$10,075 ⁴

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7
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9
10
11 I have been informed by the Company that the primary reason for the increase in
12 outside services costs experienced during the Test Year was the fact that during 2003 the
13 Company wrote-off some deferred costs relating to prior years. Therefore, the 2003 Test
14 Year costs do not represent a normal, prospective level of outside services costs.
15 Moreover, the incremental costs incurred in the Test Year relate to prior period costs that
16 are not likely to reoccur. Permitting recovery of these costs in prospective rates would
17
18
19

4 The Company claimed \$9,953 in its filing.

2 result in retroactive ratemaking and would also result in rates that do not represent
3 normal, prospective operations.

4 **Q. What do you recommend?**

5 A. I recommend that a normal, prospective level of outside services costs be included in the
6 Company's revenue requirement. Given the fact that these costs were relatively stable
7 until 2003, I recommend that the three-year average of these costs from 2000 to 2002 be
8 used to determine an appropriate expense allowance. My recommendation is shown in
9 Schedule ACC-13W for the water utility and in Schedule ACC-13S for the sewer utility.

10
11 **G. Miscellaneous Expenses**

12 **Q. What has been the Company's history with regard to miscellaneous expenses?**

13 A. Like its outside services costs, the Company's miscellaneous expenses were also
14 relatively stable from 2001-2002 in both its water and sewer utilities. However, these
15 expenses also increased significantly in 2003, as shown below:

16

<u>Miscellaneous Costs</u>	<u>Water Utility</u>	<u>Sewer Utility</u>
2000	\$ 1,673	\$ 660
2001	\$ 1,546	\$ 610
2002	\$ 2,803	\$ 1,105
2003	\$32,283	\$12,670 ⁵

17
18
19
20

5 The Company claimed \$12,517 in its filing.

1 According to the Company, the significant increase in miscellaneous costs experienced in
2 the Test Year was due to fines that were imposed upon the Company.

3
4 **Q. Should these fines be included in the Company's miscellaneous expense claim?**

5 A. No, they should not, for two reasons. First, ratepayers should not be required to pay for
6 penalties that are imposed as a result of the Company's failure to comply with all
7 governmental rules and regulations. These costs should be borne by shareholders, who
8 are responsible for ensuring proper operation and management of the utility.

9 Second, fines and penalties are non-recurring expenses. Montague is not expected
10 to incur these costs prospectively. Nor would these costs be incurred under normal
11 operating conditions. For all of these reasons, I recommend that these expenses be
12 eliminated from the Company's revenue requirement claim.

13
14 **Q. How did you determine an appropriate level of miscellaneous costs to include in the
15 Company's revenue requirement?**

16 A. Given the fact that these costs, like the outside services costs, were relatively stable until
17 2003, I recommend that the three-year average of these costs from 2000 to 2002 be used
18 to determine an appropriate expense allowance. My recommendation is shown in
19 Schedule ACC-14W for the water utility and in Schedule ACC-14S for the sewer utility.

H. State Income Taxes

2 **Q. Did the Company include a state income tax liability in its revenue requirement?**

3 A. Yes, it did. Montague included a state income tax liability based on a tax rate of 9.0% in
4 its revenue requirement claims for both the water and sewer utilities. In addition,
5 Montague included a GR&FT expense based on a tax rate of approximately 14.06%.

6
7 **Q. Is Montague subject to a state income tax in New Jersey?**

8 A. No, it is my understanding that the state income tax has been replaced by the GR&FT for
9 water utilities in New Jersey. Montague confirmed that it is no longer subject to the state
10 income tax and that the inclusion of the state income tax in its filing was in error. At
11 Schedules ACC-15W and 15S, I have made adjustments to eliminate the Company's state
12 income tax expense.

13 It should be noted that the Company's filings reflect an operating loss under
14 present rates for both its water and sewer utilities. Therefore, the state income tax
15 included in the filings by Montague was a credit, i.e., it actually served to reduce the
16 Company's deficiency. Therefore, my adjustment to eliminate the state income tax
17 expense will increase the Company's need for rate relief at present rates, all other factors
18 being equal. However, the elimination of the state income tax will also result in a lower
19 revenue multiplier that will have an offsetting effect on the Company's need for rate
20 relief.

21

1 **I. Depreciation Expense**

2 **Q. Are you recommending any adjustment to the Company's depreciation expense**
3 **claim?**

4 **A. Yes, I am recommending an adjustment to revise the Company's depreciation expense**
5 **claim consistent with my recommended utility plant in service adjustment. To determine**
6 **the amount of depreciation expense to exclude from the Company's revenue requirement,**
7 **I applied the Company's composite depreciation rate of 2% as reported in its filing to my**
8 **recommended utility plant in service adjustment. My adjustments are shown in Schedule**
9 **ACC-16W for the water utility and in Schedule ACC-16S for the sewer utility.**

10
11 **J. Interest Synchronization**

12 **Q. Have you adjusted the pro forma interest expense for income tax purposes?**

13 **A. Yes, I have made this adjustment at Schedule ACC-17W for the water utility and at**
14 **Schedule ACC-17S for the sewer utility. It is consistent (synchronized) with my**
15 **recommended rate base, capital structure, and cost of capital recommendations. I am**
16 **recommending a lower rate base than the rate base included in the Company's filing. My**
17 **recommendations, therefore, result in lower pro forma interest expense for the Company.**
18 **This lower interest expense, which is an income tax deduction for federal tax purposes,**
19 **will result in an increase to the Company's income tax liability under my**
20 **recommendations. Therefore, my recommendations result in an interest synchronization**
21 **adjustment that reflects a higher income tax burden for the Company, and a decrease to**
22 **pro forma income at present rates.**

1 **K. Income and Revenue Factors**

2 **Q. What income tax factor have you used to quantify your adjustments?**

3 A. As shown on Schedules ACC-18W and 18S, I have used a federal income tax rate of
4 34%, which is the same rate used by the Company in its filing.

5
6 **Q. What revenue multiplier have you used for your adjustments?**

7 A. My revenue multiplier includes the GR&FT rate of 14.06%, an uncollectible rate of
8 1.41% in the water utility and of 1.25% in the sewer utility, and the federal income tax
9 rate of 34% discussed above. My recommendations result in a revenue multiplier of
10 1.792452 for the water utility, as shown on Schedule ACC-19W, and of 1.789102 for the
11 sewer utility, as shown in Schedule ACC-19S.

12
13 **L. Revenue Requirement Summary**

14 **Q. What is the result of the revenue requirement recommendations contained in your
15 testimony?**

16 A. My recommendations indicate a revenue requirement deficiency at present rates of \$24,318
17 for the water utility, as summarized in Schedule ACC-1W, and of \$6,938 for the sewer
18 utility, as summarized in Schedule ACC-1S.

19
20 **Q. Have you developed a pro forma income statement?**

21 A. Yes, in Schedules ACC-20W and ACC-20S, I have provided pro forma income statements
22 for the water and sewer utilities respectively, showing utility operating income under several

1 scenarios, including the Company's claimed operating income at present rates, my
2 recommended operating income at present rates, and operating income under my proposed
3 rate increases. My recommendations will result in an overall return on rate base of 7.98%.

4
5 **Q. Have you quantified the revenue requirement impact of each of your**
6 **recommendations?**

7 A. Yes, at Schedules ACC-21W and ACC-21S, I have quantified the revenue requirement
8 impact of each of the rate of return, rate base, revenue and expense recommendations
9 contained in this testimony for the water and sewer utilities respectively.

10
11
12 **VIII. PHASE II REQUEST**

13 **Q. Should the Board approve the Company's request for a Phase II increase for its**
14 **sewer operations at this time?**

15 A. No, it should not. As stated in Mr. Woods's testimony, there is still some uncertainty
16 regarding the specific manner in which the problems at leach fields 3A and 3B will be
17 resolved and the associated costs. The Ratepayer Advocate recommends that no Phase II
18 increase be approved until the corrective action has been taken and the capital costs are
19 known. At that time, the BPU could also approve the amortization of the Company's
20 deferred costs relating to sludge hauling that has taken place since January 2003. The
21 Phase II increase could include recovery of both the capital costs associated with
22 corrective action taken at the leach fields as well as the annual amortization for the

1 deferred hauling costs. This issue is addressed in more detail in the testimony of Mr.
2 Woods.

3
4
5 **IX. RATE DESIGN ISSUES**

6 **Q. What rate design is the Company proposing to recover any additional revenues that**
7 **may be authorized as a result of this case?**

8 A. As stated on page 8, lines 24-26 of the testimony of Ms. Weeks, “[s]ince the existing
9 rates were designed following Staff’s input, we relied on that expertise here and propose
10 an across the board increase in both the water and sewer rates.”

11
12 **Q. Do you believe that such a proposal is appropriate?**

13 A. Yes, I do. The Company did not provide a cost of study in this filing and therefore there
14 is no basis for changing the current rate design. In addition, the vast majority of the
15 Company’s customers are residential customers. Therefore, there is unlikely to be a
16 serious discrepancy in the margins being contributed by each customer class. In
17 addition, there are very limited ways in which any rate increase could be spread, given the
18 large number of residential customers served by the Company. Accordingly, at this time I
19 support the Company’s proposal to spread any authorized rate increase across-the-board.

20
21 **Q. Does this conclude your testimony?**

22 A. Yes, it does.

APPENDIX A

List of Prior Testimonies

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Comcast of New Jersey, Inc.	C	New Jersey	CR03100876,77,79,80	5/04	Form 1240 Cable Rates	Division of the Ratepayer Advocate
Comcast of Central New Jersey, et al.	C	New Jersey	CR03100749-750 CR03100759-762	4/04	Cable Rates	Division of the Ratepayer Advocate
Time Warner	C	New Jersey	CR03100763-764	4/04	Cable Rates	Division of the Ratepayer Advocate
Interstate Navigation Company	N	Rhode Island	3573	3/04	Revenue Requirements	Division of Public Utilities and Carriers
Aqua Pennsylvania, Inc.	W	Pennsylvania	R-00038805	2/04	Revenue Requirements	Pennsylvania Office of Consumer Advocate
Comcast of Jersey City, et al.	C	New Jersey	CR03080598-601	2/04	Cable Rates	Division of the Ratepayer Advocate
Delmarva Power and Light Company	G	Delaware	03-378F	2/04	Fuel Clause	Division of the Public Advocate
Atmos Energy Corp.	G	Kansas	03-ATMG-1036-RTS	11/03	Revenue Requirements	Citizens' Utility Ratepayer Board
Aquila, Inc. (UCU)	G	Kansas	02-UTCG-701-GIG	10/03	Using utility assets as collateral	Citizens' Utility Ratepayer Board
CenturyTel of Northwest Arkansas, LLC	T	Arkansas	03-041-U	10/03	Affiliated Interests	The Arkansas Public Service Commission General Staff
Borough of Butler Electric Utility	E	New Jersey	CR03010049/63	9/03	Revenue Requirements	Division of the Ratepayer Advocate
Comcast Cablevision of Avalon Comcast Cable Communications	C	New Jersey	CR03020131-132	9/03	Cable Rates	Division of the Ratepayer Advocate
Delmarva Power and Light Company d/b/a Conectiv Power Delivery	E	Delaware	03-127	8/03	Revenue Requirements	Division of the Public Advocate
Kansas Gas Service	G	Kansas	03-KGSG-602-RTS	7/03	Revenue Requirements	Citizens' Utility Ratepayer Board
Washington Gas Light Company	G	Maryland	8959	6/03	Cost of Capital Incentive Rate Plan	U.S. DOD/FEA
Pawtucket Water Supply Board	W	Rhode Island	3497	6/03	Revenue Requirements	Division of Public Utilities and Carriers
Atlantic City Electric Company	E	New Jersey	EO03020091	5/03	Stranded Costs	Division of the Ratepayer Advocate
Public Service Company of New Mexico	G	New Mexico	03-000-17 UT	5/03	Cost of Capital Cost Allocations	Office of the New Mexico Attorney General
Comcast - Hopewell, et al.	C	New Jersey	CR02110818 CR02110823-825	5/03	Cable Rates	Division of the Ratepayer Advocate
Cablevision Systems Corporation	C	New Jersey	CR02110838, 43-50	4/03	Cable Rates	Division of the Ratepayer Advocate
Comcast-Garden State / Northwest	C	New Jersey	CR02100715 CR02100719	4/03	Cable Rates	Division of the Ratepayer Advocate
Midwest Energy, Inc. and Westar Energy, Inc.	E	Kansas	03-MDWE-421-ACQ	4/03	Acquisition	Citizens' Utility Ratepayer Board

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Time Warner Cable	C	New Jersey	CR02100722 CR02100723	4/03	Cable Rates	Division of the Ratepayer Advocate
Westar Energy, Inc.	E	Kansas	01-WSRE-949-GIE	3/03	Restructuring Plan	Citizens' Utility Ratepayer Board
Public Service Electric and Gas Company	E	New Jersey	ER02080604 PUC 7983-02	1/03	Deferred Balance	Division of the Ratepayer Advocate
Atlantic City Electric Company d/b/a Conectiv Power Delivery	E	New Jersey	ER02080510 PUC 6917-02S	1/03	Deferred Balance	Division of the Ratepayer Advocate
Walkill Sewer Company	WW	New Jersey	WR02030193 WR02030194	12/02	Revenue Requirements Purchased Sewage Treatment Adjustment	Division of the Ratepayer Advocate
Midwest Energy, Inc.	E	Kansas	03-MDWE-001-RTS	12/02	Revenue Requirements	Citizens' Utility Ratepayer Board
Comcast-LBI Crestwood	C	New Jersey	CR02050272 CR02050270	11/02	Cable Rates	Division of the Ratepayer Advocate
Reliant Energy Arkla	G	Oklahoma	PUD200200166	10/02	Affiliated Interest Transactions	Oklahoma Corporation Commission, Public Utility Division Staff
Midwest Energy, Inc.	G	Kansas	02-MDWG-922-RTS	10/02	Gas Rates	Citizens' Utility Ratepayer Board
Comcast Cablevision of Avalon	C	New Jersey	CR02030134 CR02030137	7/02	Cable Rates	Division of the Ratepayer Advocate
RCN Telecom Services, Inc., and Home Link Communications	C	New Jersey	CR02010044, CR02010047	7/02	Cable Rates	Division of the Ratepayer Advocate
Washington Gas Light Company	G	Maryland	8920	7/02	Rate of Return Rate Design (Rebuttal)	General Services Administration (GSA)
Chesapeake Utilities Corporation	G	Delaware	01-307, Phase II	7/02	Rate Design Tariff Issues	Division of the Public Advocate
Washington Gas Light Company	G	Maryland	8920	6/02	Rate of Return Rate Design	General Services Administration (GSA)
Tidewater Utilities, Inc.	W	Delaware	02-28	6/02	Revenue Requirements	Division of the Public Advocate
Western Resources, Inc.	E	Kansas	01-WSRE-949-GIE	5/02	Financial Plan	Citizens' Utility Ratepayer Board
Empire District Electric Company	E	Kansas	02-EPDE-488-RTS	5/02	Revenue Requirements	Citizens' Utility Ratepayer Board
Southwestern Public Service Company	E	New Mexico	3709	4/02	Fuel Costs	Office of the New Mexico Attorney General
Cablevision Systems	C	New Jersey	CR01110706, et al	4/02	Cable Rates	Division of the Ratepayer Advocate
Potomac Electric Power Company	E	District of Columbia	945, Phase II	4/02	Divestiture Procedures	General Services Administration (GSA)
Vermont Yankee Nuclear Power Corp.	E	Vermont	6545	3/02	Sale of VY to Entergy Corp. (Supplemental)	Department of Public Service

The Columbia Group, Inc., Testimonies of Andrea C. Crane

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Delmarva Power and Light Company	G	Delaware	01-348F	1/02	Gas Cost Adjustment	Division of the Public Advocate
Vermont Yankee Nuclear Power Corp.	E	Vermont	6545	1/02	Sale of VY to Entergy Corp.	Department of Public Service
Pawtucket Water Supply Company	W	Rhode Island	3378	12/01	Revenue Requirements	Division of Public Utilities and Carriers
Chesapeake Utilities Corporation	G	Delaware	01-307, Phase I	12/01	Revenue Requirements	Division of the Public Advocate
Potomac Electric Power Company	E	Maryland	8796	12/01	Divestiture Procedures	General Services Administration (GSA)
Kansas Electric Power Cooperative	E	Kansas	01-KEPE-1106-RTS	11/01	Depreciation Methodology (Cross Answering)	Citizens' Utility Ratepayer Board
Wellsboro Electric Company	E	Pennsylvania	R-00016356	11/01	Revenue Requirements	Office of Consumer Advocate
Kent County Water Authority	W	Rhode Island	3311	10/01	Revenue Requirements (Surrebuttal)	Division of Public Utilities and Carriers
Pepco and New RC, Inc.	E	District of Columbia	1002	10/01	Merger Issues and Performance Standards	General Services Administration (GSA)
Potomac Electric Power Co. & Delmarva Power	E	Delaware	01-194	10/01	Merger Issues and Performance Standards	Division of the Public Advocate
Yankee Gas Company	G	Connecticut	01-05-19PH01	9/01	Affiliated Transactions	Office of Consumer Counsel
Hope Gas, Inc., d/b/a Dominion Hope	G	West Virginia	01-0330-G-42T 01-0331-G-30C 01-1842-GT-T 01-0685-G-PC	9/01	Revenue Requirements (Rebuttal)	The Consumer Advocate Division of the PSC
Pennsylvania-American Water Company	W	Pennsylvania	R-00016339	9/01	Revenue Requirements (Surrebuttal)	Office of Consumer Advocate
Potomac Electric Power Co. & Delmarva Power	E	Maryland	8890	9/01	Merger Issues and Performance Standards	General Services Administration (GSA)
Comcast Cablevision of Long Beach Island, et al	C	New Jersey	CR01030149-50 CR01050285	9/01	Cable Rates	Division of the Ratepayer Advocate
Kent County Water Authority	W	Rhode Island	3311	8/01	Revenue Requirements	Division of Public Utilities and Carriers
Pennsylvania-American Water Company	W	Pennsylvania	R-00016339	8/01	Revenue Requirements	Office of Consumer Advocate
Roxiticus Water Company	W	New Jersey	WR01030194	8/01	Revenue Requirements Cost of Capital Rate Design	Division of the Ratepayer Advocate
Hope Gas, Inc., d/b/a Dominion Hope	G	West Virginia	01-0330-G-42T 01-0331-G-30C 01-1842-GT-T 01-0685-G-PC	8/01	Revenue Requirements	The Consumer Advocate Division of the PSC
Western Resources, Inc.	E	Kansas	01-WSRE-949-GIE	6/01	Restructuring Financial Integrity (Rebuttal)	Citizens' Utility Ratepayer Board
Western Resources, Inc.	E	Kansas	01-WSRE-949-GIE	6/01	Restructuring Financial Integrity	Citizens' Utility Ratepayer Board

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Cablevision of Allamuchy, et al	C	New Jersey	CR00100824, etc.	4/01	Cable Rates	Division of the Ratepayer Advocate
Public Service Company of New Mexico	E	New Mexico	3137, Holding Co.	4/01	Holding Company	Office of the Attorney General
Keauhou Community Services, Inc.	W	Hawaii	00-0094	4/01	Rate Design	Division of Consumer Advocacy
Western Resources, Inc.	E	Kansas	01-WSRE-436-RTS	4/01	Revenue Requirements Affiliated Interests (Motion for Suppl. Changes)	Citizens' Utility Ratepayer Board
Western Resources, Inc.	E	Kansas	01-WSRE-436-RTS	4/01	Revenue Requirements Affiliated Interests	Citizens' Utility Ratepayer Board
Public Service Company of New Mexico	E	New Mexico	3137, Part III	4/01	Standard Offer Service (Additional Direct)	Office of the Attorney General
Chem-Nuclear Systems, LLC	SW	South Carolina	2000-366-A	03/01	Allowable Costs	Department of Consumer Affairs
Southern Connecticut Gas Company	G	Connecticut	00-12-08	03/01	Affiliated Interest Transactions	Office of Consumer Counsel
Atlantic City Sewerage Corporation	S	New Jersey	WR00080575	3/01	Revenue Requirements Cost of Capital Rate Design	Division of the Ratepayer Advocate
Delmarva Power and Light Company d/b/a Conectiv Power Delivery	G	Delaware	00-314	3/01	Margin Sharing	Division of the Public Advocate
Senate Bill 190 Re: Performance Based Ratemaking	G	Kansas	Senate Bill 190	2/01	Performance-Based Ratemaking Mechanisms	Citizens' Utility Ratepayer Board
Delmarva Power and Light Company	G	Delaware	00-463-F	2/01	Gas Cost Rates	Division of the Public Advocate
Waitsfield Fayston Telephone Company	T	Vermont	6417	12/00	Revenue Requirements	Department of Public Service
Delaware Electric Cooperative	E	Delaware	00-365	11/00	Code of Conduct Cost Allocation Manual	Division of the Public Advocate
Commission Inquiry into Performance-Based Ratemaking	G	Kansas	00-GIMG-425-GIG	10/00	Performance-Based Ratemaking Mechanisms	Citizens' Utility Ratepayer Board
Pawtucket Water Supply Board	W	Rhode Island	3164 Separation Plan	10/00	Revenue Requirements	Division of Public Utilities and Carriers
Public Service Company of New Mexico	E	New Mexico	3137, Part III	9/00	Standard Offer Service	Office of the Attorney General
Laie Water Company	W	Hawaii	00-0017 Separation Plan	8/00	Rate Design	Division of Consumer Advocacy
El Paso Electric Company	E	New Mexico	3170, Part II, Ph. 1	7/00	Electric Restructuring	Office of the Attorney General
Public Service Company of New Mexico	E	New Mexico	3137 - Part II Separation Plan	7/00	Electric Restructuring	Office of the Attorney General
PG Energy	G	Pennsylvania	R-00005119	6/00	Revenue Requirements	Office of Consumer Advocate
Consolidated Edison, Inc. and Northeast Utilities	E/G	Connecticut	00-01-11	4/00	Merger issues (Additional Supplemental)	Office of Consumer Counsel

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Sussex Shores Water Company	W	Delaware	99-576	4/00	Revenue Requirements	Division of the Public Advocate
Utilicorp United, Inc.	G	Kansas	00-UTCG-336-RTS	4/00	Revenue Requirements	Citizens' Utility Ratepayer Board
TCI Cablevision	C	Missouri	9972-9146	4/00	Late Fees (Affidavit)	Honora Eppert, et al
Oklahoma Natural Gas Company	G	Oklahoma	PUD 990000166 PUD 980000683 PUD 990000570	3/00	Pro Forma Revenue Affiliated Transactions (Rebuttal)	Oklahoma Corporation Commission, Public Utility Division Staff
Tidewater Utilities, Inc. Public Water Supply Co.	W	Delaware	99-466	3/00	Revenue Requirements	Division of the Public Advocate
Delmarva Power and Light Company	G/E	Delaware	99-582	3/00	Cost Accounting Manual Code of Conduct	Division of the Public Advocate
Philadelphia Suburban Water Company	W	Pennsylvania	R-00994868 R-00994877 R-00994878 R-00994879	3/00	Revenue Requirements (Surrebuttal)	Office of Consumer Advocate
Philadelphia Suburban Water Company	W	Pennsylvania	R-00994868 R-00994877 R-00994878 R-00994879	2/00	Revenue Requirements	Office of Consumer Advocate
Consolidated Edison, Inc. and Northeast Utilities	E/G	Connecticut	00-01-11	2/00	Merger Issues	Office of Consumer Counsel
Oklahoma Natural Gas Company	G	Oklahoma	PUD 990000166 PUD 980000683 PUD 990000570	1/00	Pro Forma Revenue Affiliated Transactions	Oklahoma Corporation Commission, Public Utility Division Staff
Connecticut Natural Gas Company	G	Connecticut	99-09-03	1/00	Affiliated Transactions	Office of Consumer Counsel
Time Warner Entertainment Company, L.P.	C	Indiana	48D06-9803-CP-423	1999	Late Fees (Affidavit)	Kelly J. Whiteman, et al
TCI Communications, Inc., et al	C	Indiana	55D01-9709-CP-00415	1999	Late Fees (Affidavit)	Franklin E. Littell, et al
Southwestern Public Service Company	E	New Mexico	3116	12/99	Merger Approval	Office of the Attorney General
New England Electric System Eastern Utility Associates	E	Rhode Island	2930	11/99	Merger Policy	Department of Attorney General
Delaware Electric Cooperative	E	Delaware	99-457	11/99	Electric Restructuring	Division of the Public Advocate
Jones Intercable, Inc.	C	Maryland	CAL98-00283	10/99	Cable Rates (Affidavit)	Cynthia Maisonette and Ola Renee Chatman, et al
Texas-New Mexico Power Company	E	New Mexico	3103	10/99	Acquisition Issues	Office of Attorney General
Southern Connecticut Gas Company	G	Connecticut	99-04-18	9/99	Affiliated Interest	Office of Consumer Counsel
TCI Cable Company	C	New Jersey	CR99020079 et al	9/99	Cable Rates Forms 1240/1205	Division of the Ratepayer Advocate

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
All Regulated Companies	E/GW	Delaware	Reg. No. 4	8/99	Filing Requirements (Position Statement)	Division of the Public Advocate
Mile High Cable Partners	C	Colorado	95-CV-5195	7/99	Cable Rates (Affidavit)	Brett Marshall, an individual, et al
Electric Restructuring Comments	E	Delaware	Reg. 49	7/99	Regulatory Policy (Supplemental)	Division of the Public Advocate
Long Neck Water Company	W	Delaware	99-31	6/99	Revenue Requirements	Division of the Public Advocate
Delmarva Power and Light Company	E	Delaware	99-163	6/99	Electric Restructuring	Division of the Public Advocate
Potomac Electric Power Company	E	District of Columbia	945	6/99	Divestiture of Generation Assets	U.S. GSA - Public Utilities
Comcast	C	Indiana	49C01-9802-CP-000386	6/99	Late Fees (Affidavit)	Ken Hecht, et al
Petitions of BA-NJ and NJPA re: Payphone Ops	T	New Jersey	TO97100792 PUCOT 11269-97N	6/99	Economic Subsidy Issues (Surrebuttal)	Division of the Ratepayer Advocate
Montague Water and Sewer Companies	W/WW	New Jersey	WR98101161 WR98101162 PUCRS 11514-98N	5/99	Revenue Requirements Rate Design (Supplemental)	Division of the Ratepayer Advocate
Cablevision of Bergen, Bayonne, Newark	C	New Jersey	CR98111197-199 CR98111190	5/99	Cable Rates Forms 1240/1205	Division of the Ratepayer Advocate
Cablevision of Bergen, Hudson, Monmouth	C	New Jersey	CR97090624-626 CTV 1697-98N	5/99	Cable Rates - Form 1235 (Rebuttal)	Division of the Ratepayer Advocate
Kent County Water Authority	W	Rhode Island	2860	4/99	Revenue Requirements	Division of Public Utilities & Carriers
Montague Water and Sewer Companies	W/WW	New Jersey	WR98101161 WR98101162	4/99	Revenue Requirements Rate Design	Division of the Ratepayer Advocate
PEPCO	E	District of Columbia	945	4/99	Divestiture of Assets	U.S. GSA - Public Utilities
Western Resources, Inc. and Kansas City Power & Light	E	Kansas	97-WSRE-676-MER	4/99	Merger Approval (Surrebuttal)	Citizens' Utility Ratepayer Board
Delmarva Power and Light Company	E	Delaware	98-479F	3/99	Fuel Costs	Division of the Public Advocate
Lenfest Atlantic d/b/a Suburban Cable	C	New Jersey	CR97070479 et al	3/99	Cable Rates	Division of the Ratepayer Advocate
Electric Restructuring Comments	E	District of Columbia	945	3/99	Regulatory Policy	U.S. GSA - Public Utilities
Petitions of BA-NJ and NJPA re: Payphone Ops	T	New Jersey	TO97100792 PUCOT 11269-97N	3/99	Tariff Revision Payphone Subsidies FCC Services Test (Rebuttal)	Division of the Ratepayer Advocate
Western Resources, Inc. and Kansas City Power & Light	E	Kansas	97-WSRE-676-MER	3/99	Merger Approval (Answering)	Citizens' Utility Ratepayer Board
Western Resources, Inc. and Kansas City Power & Light	E	Kansas	97-WSRE-676-MER	2/99	Merger Approval	Citizens' Utility Ratepayer Board

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Adelphia Cable Communications	C	Vermont	6117-6119	1/99	Late Fees (Additional Direct Supplemental)	Department of Public Service
Adelphia Cable Communications	C	Vermont	6117-6119	12/98	Cable Rates (Forms 1240, 1205, 1235) and Late Fees (Direct Supplemental)	Department of Public Service
Adelphia Cable Communications	C	Vermont	6117-6119	12/98	Cable Rates (Forms 1240, 1205, 1235) and Late Fees	Department of Public Service
Orange and Rockland/ Consolidated Edison	E	New Jersey	EM98070433	11/98	Merger Approval	Division of the Ratepayer Advocate
Cablevision	C	New Jersey	CR97090624 CR97090625 CR97090626	11/98	Cable Rates - Form 1235	Division of the Ratepayer Advocate
Petitions of BA-NJ and NJPA re: Payphone Ops.	T	New Jersey	TO97100792 PUCOT 11269-97N	10/98	Payphone Subsidies FCC New Services Test	Division of the Ratepayer Advocate
United Water Delaware	W	Delaware	Docket No. 98-98	8/98	Revenue Requirements	Division of the Public Advocate
Cablevision	C	New Jersey	CR97100719, 726 730, 732	8/98	Cable Rates (Oral Testimony)	Division of the Ratepayer Advocate
Potomac Electric Power Company	E	Maryland	Case No. 8791	8/98	Revenue Requirements Rate Design	U.S. GSA - Public Utilities
Investigation of BA-NJ IntraLATA Calling Plans	T	New Jersey	TO97100808 PUCOT 11326-97N	8/98	Anti-Competitive Practices (Rebuttal)	Division of the Ratepayer Advocate
Investigation of BA-NJ IntraLATA Calling Plans	T	New Jersey	TO97100808 PUCOT 11326-97N	7/98	Anti-Competitive Practices	Division of the Ratepayer Advocate
TCI Cable Company/ Cablevision	C	New Jersey	CTV 03264-03268 and CTV 05061	7/98	Cable Rates	Division of the Ratepayer Advocate
Mount Holly Water Company	W	New Jersey	WR98020058 PUC 03131-98N	7/98	Revenue Requirements	Division of the Ratepayer Advocate
Pawtucket Water Supply Board	W	Rhode Island	2674	5/98	Revenue Requirements (Surrebuttal)	Division of Public Utilities & Carriers
Pawtucket Water Supply Board	W	Rhode Island	2674	4/98	Revenue Requirements	Division of Public Utilities and Carriers
Energy Master Plan Phase II Proceeding - Restructuring	E	New Jersey	EX94120585U, EO97070457,60,63,66	4/98	Electric Restructuring Issues (Supplemental Surrebuttal)	Division of the Ratepayer Advocate
Energy Master Plan Phase I Proceeding - Restructuring	E	New Jersey	EX94120585U, EO97070457,60,63,66	3/98	Electric Restructuring Issues	Division of the Ratepayer Advocate
Shorelands Water Company	W	New Jersey	WR97110835 PUC 11324-97	2/98	Revenue Requirements	Division of the Ratepayer Advocate
TCI Communications, Inc.	C	New Jersey	CR97030141 and others	11/97	Cable Rates (Oral Testimony)	Division of the Ratepayer Advocate
Citizens Telephone Co. of Kecksburg	T	Pennsylvania	R-00971229	11/97	Alternative Regulation Network Modernization	Office of Consumer Advocate
Consumers Pennsylvania Water Co. - Shenango Valley Division	W	Pennsylvania	R-00973972	10/97	Revenue Requirements (Surrebuttal)	Office of Consumer Advocate

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Universal Service Funding	T	New Jersey	TX95120631	10/97	Schools and Libraries Funding (Rebuttal)	Division of the Ratepayer Advocate
Universal Service Funding	T	New Jersey	TX95120631	9/97	Low Income Fund High Cost Fund	Division of the Ratepayer Advocate
Consumers Pennsylvania Water Co. - Shenango Valley Division	W	Pennsylvania	R-00973972	9/97	Revenue Requirements	Office of Consumer Advocate
Delmarva Power and Light Company	G/E	Delaware	97-65	9/97	Cost Accounting Manual Code of Conduct	Office of the Public Advocate
Western Resources, Oneok, and WAI	G	Kansas	WSRG-486-MER	9/97	Transfer of Gas Assets	Citizens' Utility Ratepayer Board
Universal Service Funding	T	New Jersey	TX95120631	9/97	Schools and Libraries Funding (Rebuttal)	Division of the Ratepayer Advocate
Universal Service Funding	T	New Jersey	TX95120631	8/97	Schools and Libraries Funding	Division of the Ratepayer Advocate
Kent County Water Authority	W	Rhode Island	2555	8/97	Revenue Requirements (Surrebuttal)	Division of Public Utilities and Carriers
Ironton Telephone Company	T	Pennsylvania	R-00971182	8/97	Alternative Regulation Network Modernization (Surrebuttal)	Office of Consumer Advocate
Ironton Telephone Company	T	Pennsylvania	R-00971182	7/97	Alternative Regulation Network Modernization	Office of Consumer Advocate
Comcast Cablevision	C	New Jersey	Various	7/97	Cable Rates (Oral Testimony)	Division of the Ratepayer Advocate
Maxim Sewerage Corporation	WW	New Jersey	WR97010052 PUCRA 3154-97N	7/97	Revenue Requirements	Division of the Ratepayer Advocate
Kent County Water Authority	W	Rhode Island	2555	6/97	Revenue Requirements	Division of Public Utilities and Carriers
Consumers Pennsylvania Water Co. - Roaring Creek	W	Pennsylvania	R-00973869	6/97	Revenue Requirements (Surrebuttal)	Office of Consumer Advocate
Consumers Pennsylvania Water Co. - Roaring Creek	W	Pennsylvania	R-00973869	5/97	Revenue Requirements	Office of Consumer Advocate
Delmarva Power and Light Company	E	Delaware	97-58	5/97	Merger Policy	Office of the Public Advocate
Middlesex Water Company	W	New Jersey	WR96110818 PUCRL 11663-96N	4/97	Revenue Requirements	Division of the Ratepayer Advocate
Maxim Sewerage Corporation	WW	New Jersey	WR96080628 PUCRA 09374-96N	3/97	Purchased Sewerage Adjustment	Division of the Ratepayer Advocate
Interstate Navigation Company	N	Rhode Island	2484	3/97	Revenue Requirements Cost of Capital (Surrebuttal)	Division of Public Utilities & Carriers
Interstate Navigation Company	N	Rhode Island	2484	2/97	Revenue Requirements Cost of Capital	Division of Public Utilities & Carriers
Electric Restructuring Comments	E	District of Columbia	945	1/97	Regulatory Policy	U.S. GSA - Public Utilities

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
United Water Delaware	W	Delaware	96-194	1/97	Revenue Requirements	Office of the Public Advocate
PEPCO/ BGE/ Merger Application	E/G	District of Columbia	951	10/96	Regulatory Policy Cost of Capital (Rebuttal)	GSA
Western Resources, Inc.	E	Kansas	193,306-U 193,307-U	10/96	Revenue Requirements Cost of Capital (Supplemental)	Citizens' Utility Ratepayer Board
PEPCO and BGE Merger Application	E/G	District of Columbia	951	9/96	Regulatory Policy, Cost of Capital	U.S. GSA - Public Utilities
Utilicorp United, Inc.	G	Kansas	193,787-U	8/96	Revenue Requirements	Citizens' Utility Ratepayer Board
TKR Cable Company of Gloucester	C	New Jersey	CTV07030-95N	7/96	Cable Rates (Oral Testimony)	Division of the Ratepayer Advocate
TKR Cable Company of Warwick	C	New Jersey	CTV057537-95N	7/96	Cable Rates (Oral Testimony)	Division of the Ratepayer Advocate
Delmarva Power and Light Company	E	Delaware	95-196F	5/96	Fuel Cost Recovery	Office of the Public Advocate
Western Resources, Inc.	E	Kansas	193,306-U 193,307-U	5/96	Revenue Requirements Cost of Capital	Citizens' Utility Ratepayer Board
Princeville Utilities Company, Inc.	W/WW	Hawaii	95-0172 95-0168	1/96	Revenue Requirements Rate Design	Princeville at Hanalei Community Association
Western Resources, Inc.	G	Kansas	193,305-U	1/96	Revenue Requirements Cost of Capital	Citizens' Utility Ratepayer Board
Environmental Disposal Corporation	WW	New Jersey	WR94070319 (Remand Hearing)	11/95	Revenue Requirements Rate Design (Supplemental)	Division of the Ratepayer Advocate
Environmental Disposal Corporation	WW	New Jersey	WR94070319 (Remand Hearing)	11/95	Revenue Requirements	Division of the Ratepayer Advocate
Lanai Water Company	W	Hawaii	94-0366	10/95	Revenue Requirements Rate Design	Division of Consumer Advocacy
Cablevision of New Jersey, Inc.	C	New Jersey	CTV01382-95N	8/95	Basic Service Rates (Oral Testimony)	Division of the Ratepayer Advocate
Cablevision of New Jersey, Inc.	C	New Jersey	CTV01381-95N	8/95	Basic Service Rates (Oral Testimony)	Division of the Ratepayer Advocate
Chesapeake Utilities Corporation	G	Delaware	95-73	7/95	Revenue Requirements	Office of the Public Advocate
East Honolulu Community Services, Inc.	WW	Hawaii	7718	6/95	Revenue Requirements	Division of Consumer Advocacy
Wilmington Suburban Water Corporation	W	Delaware	94-149	3/95	Revenue Requirements	Office of the Public Advocate
Environmental Disposal Corporation	WW	New Jersey	WR94070319	1/95	Revenue Requirements (Supplemental)	Division of the Ratepayer Advocate
Roaring Creek Water Company	W	Pennsylvania	R-00943177	1/95	Revenue Requirements (Surrebuttal)	Office of Consumer Advocate
Roaring Creek Water Company	W	Pennsylvania	R-00943177	12/94	Revenue Requirements	Office of Consumer Advocate

The Columbia Group, Inc., Testimonies of Andrea C. Crane

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Environmental Disposal Corporation	WW	New Jersey	WR94070319	12/94	Revenue Requirements	Division of the Ratepayer Advocate
Delmarva Power and Light Company	E	Delaware	94-84	11/94	Revenue Requirements	Office of the Public Advocate
Delmarva Power and Light Company	G	Delaware	94-22	8/94	Revenue Requirements	Office of the Public Advocate
Empire District Electric Company	E	Kansas	190,360-U	8/94	Revenue Requirements	Citizens' Utility Ratepayer Board
Morris County Municipal Utility Authority	SW	New Jersey	MM10930027 ESW 1426-94	6/94	Revenue Requirements	Rate Counsel
US West Communications	T	Arizona	E-1051-93-183	5/94	Revenue Requirements (Surrebuttal)	Residential Utility Consumer Office
Pawtucket Water Supply Board	W	Rhode Island	2158	5/94	Revenue Requirements (Surrebuttal)	Division of Public Utilities & Carriers
US West Communications	T	Arizona	E-1051-93-183	3/94	Revenue Requirements	Residential Utility Consumer Office
Pawtucket Water Supply Board	W	Rhode Island	2158	3/94	Revenue Requirements	Division of Public Utilities & Carriers
Pollution Control Financing Authority of Camden County	SW	New Jersey	SR91111718J	2/94	Revenue Requirements (Supplemental)	Rate Counsel
Roaring Creek Water Company	W	Pennsylvania	R-00932665	9/93	Revenue Requirements (Supplemental)	Office of Consumer Advocate
Roaring Creek Water Company	W	Pennsylvania	R-00932665	9/93	Revenue Requirements	Office of Consumer Advocate
Kent County Water Authority	W	Rhode Island	2098	8/93	Revenue Requirements (Surrebuttal)	Division of Public Utilities and Carriers
Wilmington Suburban Water Company	W	Delaware	93-28	7/93	Revenue Requirements	Office of Public Advocate
Kent County Water Authority	W	Rhode Island	2098	7/93	Revenue Requirements	Division of Public Utilities & Carriers
Camden County Energy Recovery Associates, Inc.	SW	New Jersey	SR91111718J ESW1263-92	4/93	Revenue Requirements	Rate Counsel
Pollution Control Financing Authority of Camden County	SW	New Jersey	SR91111718J ESW 1263-92	4/93	Revenue Requirements	Rate Counsel
Jamaica Water Supply Company	W	New York	92-W-0583	3/93	Revenue Requirements	County of Nassau Town of Hempstead
New Jersey-American Water Company	W/WW	New Jersey	WR92090908J PUC 7266-92S	2/93	Revenue Requirements	Rate Counsel
Passaic County Utilities Authority	SW	New Jersey	SR91121816J ESW0671-92N	9/92	Revenue Requirements	Rate Counsel
East Honolulu Community Services, Inc.	WW	Hawaii	7064	8/92	Revenue Requirements	Division of Consumer Advocacy
The Jersey Central Power and Light Company	E	New Jersey	PUC00661-92 ER91121820J	7/92	Revenue Requirements	Rate Counsel

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Mercer County Improvement Authority	SW	New Jersey	EWS11261-91S SR91111682J	5/92	Revenue Requirements	Rate Counsel
Garden State Water Company	W	New Jersey	WR9109-1483 PUC 09118-91S	2/92	Revenue Requirements	Rate Counsel
Elizabethtown Water Company	W	New Jersey	WR9108-1293J PUC 08057-91N	1/92	Revenue Requirements	Rate Counsel
New-Jersey American Water Company	WWW	New Jersey	WR9108-1399J PUC 8246-91	12/91	Revenue Requirements	Rate Counsel
Pennsylvania-American Water Company	W	Pennsylvania	R-911909	10/91	Revenue Requirements	Office of Consumer Advocate
Mercer County Improvement Authority	SW	New Jersey	SR9004-0264J PUC 3389-90	10/90	Revenue Requirements	Rate Counsel
Kent County Water Authority	W	Rhode Island	1952	8/90	Revenue Requirements Regulatory Policy (Surrebuttal)	Division of Public Utilities & Carriers
New York Telephone	T	New York	90-C-0191	7/90	Revenue Requirements Affiliated Interests (Supplemental)	NY State Consumer Protection Board
New York Telephone	T	New York	90-C-0191	7/90	Revenue Requirements Affiliated Interests	NY State Consumer Protection Board
Kent County Water Authority	W	Rhode Island	1952	6/90	Revenue Requirements Regulatory Policy	Division of Public Utilities & Carriers
Ellesor Transfer Station	SW	New Jersey	SO8712-1407 PUC 1768-88	11/89	Regulatory Policy	Rate Counsel
Interstate Navigation Co.	N	Rhode Island	D-89-7	8/89	Revenue Requirements Regulatory Policy	Division of Public Utilities & Carriers
Automated Modular Systems, Inc.	SW	New Jersey	PUC1769-88	5/89	Revenue Requirements Schedules	Rate Counsel
SNET Cellular, Inc.	T	Connecticut	-	2/89	Regulatory Policy	First Selectman Town of Redding

APPENDIX B

Supporting Schedules

Water Schedules ACC-1W to ACC-21W

Sewer Schedules ACC-1S to ACC-21S

MONTAGUE WATER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

REVENUE REQUIREMENT SUMMARY

	Company Claim	Recommended Adjustment	Recommended Position	
	(A)			
1. Pro Forma Rate Base	\$690,141	(\$134,147)	\$555,994	(B)
2. Cost of Capital	8.28%	-0.30%	7.98%	(C)
3. Required Return	\$57,124	(\$12,749)	\$44,375	
4. Operating Income @ Present Rates	(25,059)	55,867	30,808	(D)
3. Operating Income Deficiency	\$82,183	(\$68,616)	\$13,567	
6. Revenue Multiplier	1.9698		1.7925	(E)
7. Revenue Requirement Increase	<u>\$161,880</u>	<u>(\$137,562)</u>	<u>\$24,318</u>	
8. Increase Over Present Service Rates			<u>8.88%</u>	(F)

Sources:

(A) Company Exhibit P-3 (Revised), page 2 of 10 and Exhibit P-4 (Revised), page 2 of 5.

(B) Schedule ACC-2W.

(C) Schedule ACC-3W.

(D) Schedule ACC-4W.

(E) Schedule ACC-19W.

(F) Based on pro forma water revenues of \$267,978 per Company plus revenue adjustment per Schedule ACC-7W.

MONTAGUE WATER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

RATE BASE SUMMARY

	Company Claim (A)	Recommended Adjustment	Recommended Position	
1. Gross Utility Plant in Service	\$2,048,333	\$0	\$2,048,333	
2. Accumulated Depreciation	(678,156)	0	(678,156)	
3. Net Utility Plant	\$1,370,177	\$0	\$1,370,177	
Less:				
4. Contributions in Aid of Construction	(\$371,417)	\$0	(\$371,417)	
5. Accumulated Deferred Income Taxes	(158,937)	0	(158,937)	
6. Customer Deposits	(28,417)	0	(28,417)	
7. Plant Acquisition Adjustment	(261,996)	0	(261,996)	
Plus:				
8. Post Test Year Additions	\$97,777	(\$97,777)	\$0	(B)
9. Cash Working Capital	36,358	(36,358)	0	(C)
10. Water Servcie Corporation	6,584	0	6,584	
11. Net Utility Plant	<u>\$690,129</u>	<u>(\$134,135)</u>	<u>\$555,994</u>	

Sources:

(A) Company Exhibit P-4 (Revised), page 2 of 5.

(B) Schedule ACC-5W.

(C) Schedule ACC-6W.

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****REQUIRED RETURN**

	Capital Structure Amount	Capital Structure Percent	Cost Rate	Weighted Cost
		(A)		
1. Common Equity (B)	\$77,650,144	40.77%	9.00%	3.67%
2. Long Term Debt -Current	112,819,616	59.23%	7.28%	4.31%
3. Total Cost of Capital	\$190,469,760	100.00%		<u>7.98%</u>

Sources:

(A) Derived from W/P [h-1].

(B) Cost Rate Based on Recommendation of Ms. Crane.

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****OPERATING INCOME SUMMARY**

		Schedule No.
1. Company Claim	(\$25,059)	
Recommended Adjustments:		
2. Operating Revenue	2,956	7
3. Salaries and Wages - Maintenance	7,473	8
4. Salaries and Wages - General	2,268	9
5. Payroll Taxes	745	10
6. Employee Benefits Expenses	682	11
7. Rate Case Expense	16,301	12
8. Outside Services - Other	11,556	13
9. Miscellaneous Expenses	19,982	14
10. Income Taxes - State	(5,420)	15
11. Depreciation Expense	1,291	16
12. Interest Synchronization	<u>(1,967)</u>	17
13. Net Operating Income	<u>\$30,808</u>	

MONTAGUE WATER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

UTILITY PLANT IN SERVICE ADJUSTMENTS

1. Post Test Year Plant Claim	\$97,777	(A)
2. Recommended Adjustment	<u>(\$97,777)</u>	

Sources:

(A) Company Exhibit P-4 (Revised), page 2 of 5.

MONTAGUE WATER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

CASH WORKING CAPITAL

1. Company Claim	\$36,358	(A)
2. Recommended Adjustment	<u>(\$36,358)</u>	

Sources:

(A) Company Exhibit P-4 (Revised), page 2 of 5.

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****PRO FORMA REVENUES**

1. 2003 Service Revenues		\$267,978	(A)
2. 2002 Service Revenues		283,239	(A)
3. 2001 Service Revenues		<u>270,475</u>	(A)
4. Three Year Average		\$273,897	
5. Company Claim		<u>267,978</u>	(B)
6. Recommended Adjustment		\$5,919	
7. GR&FT @	14.06%	832	(C)
8. Uncollectibles @	1.41%	83	(C)
9. Incremental Power and Chemicals		<u>524</u>	(D)
10. Taxable Income		\$4,479	
11. Income Taxes @	34.00%	<u>1,523</u>	(C)
12. Operating Income		<u>\$2,956</u>	

Sources

(A) Company Exhibit P-1, page 2 of 3.

(B) Company Exhibit P-3, page 2 of 10.

(C) Rates per Schedule ACC-19W.

(D) Based on revenue and cost relationship per Company Exhibit P-3,
(Revised), page 2 of 10.

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****SALARIES AND WAGES-MAINTENANCE**

1. Actual 2003 Salaries and Wages		\$52,203	(A)
2. Increases @	3.00%	<u>1,566</u>	(B)
3. Pro Forma Salaries		\$53,769	
4. Company Claim		<u>65,092</u>	(A)
5. Recommended Adjustment		\$11,323	
6. Income Taxes @	34.00%	<u>3,850</u>	
7. Operating Income		<u>\$7,473</u>	

Sources:

(A) Company Exhibit P-3, Revised, page 2 of 10.

(B) 3% increase per testimony of Ms. Weeks, page 5.

MONTAGUE WATER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

SALARIES AND WAGES-GENERAL EXPENSES

1. Actual 2003 Salaries and Wages		\$10,149	(A)
2. Increases @	3.00%	<u>304</u>	(B)
3. Pro Forma Salaries		\$10,453	
4. Company Claim		<u>13,890</u>	(A)
5. Recommended Adjustment		\$3,437	
6. Income Taxes @	34.00%	<u>1,168</u>	
7. Operating Income		<u>\$2,268</u>	

Sources:

(A) Exhibit P-3, Revised, page 2 of 10.

(B) 3% increase per testimony of Ms. Weeks, page 5.

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****PAYROLL TAX EXPENSE**

1. Pro Forma Salary Adjustments		\$14,759	(A)
2. Payroll Taxes @	7.65%	1,129	(B)
3. Income Taxes @	34.00%	<u>384</u>	
4. Operating Income		<u>\$745</u>	

Sources:

(A) Schedules ACC-8W and ACC-9W.

(B) Reflects statutory rate.

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****EMPLOYEE BENEFITS EXPENSE**

1. Pro Forma Salary Adjustments		\$14,759	(A)
2. Pension and 401K Rate	7.00%	1,033	(B)
3. Income Taxes @	34.00%	351	
		<hr/>	
4. Operating Income		<u>\$682</u>	

Sources:

(A) Schedules ACC-8W and ACC-(W).

(B) Reflects 3% pension rate and 4% 401K rate.

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****RATE CASE EXPENSES**

1. Company Rate Case Claim	\$157,481	(A)
2. Proposed Amortization Period	<u>3</u>	(A)
3. Annual Amortization	\$52,494	
4. Percent to Water	<u>71.72%</u>	(A)
5. Allocation to Water	\$37,649	
6. Sharing with Shareholders	<u>50%</u>	(B)
7. Pro Forma Annual Expense	\$18,824	
8. Company Claim	<u>43,523</u>	(C)
9. Recommended Adjustment	\$24,699	
10. Income Taxes @ 34.00%	<u>8,398</u>	
11. Operating Income	<u>\$16,301</u>	

Sources:

(A) Company Workpaper [d].

(B) Reflects 50/50 sharing.

(C) Derived from Company Workpaper [d].

MONTAGUE WATER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

OUTSIDE SERVICES

1. 2000 Expense	\$12,850	(A)
2. 2001 Expense	4,515	(A)
3. 2002 Expense	7,123	(A)
	<hr/>	
4. Three Year Average	\$8,163	
5. Company Claim	25,671	(B)
	<hr/>	
6. Recommended Adjustment	\$17,508	
7. Income Taxes @ 34.00%	5,953	
	<hr/>	
8. Operating Income	<u>\$11,556</u>	

Sources:

(A) Company Exhibit P-1, page 2 of 3.

(B) Company Exhibit P-3 (Revised), page 2 of 10.

MONTAGUE WATER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

MISCELLANEOUS EXPENSES

		6,022	
1. 2000 Expense		\$1,673	(A)
2. 2001 Expense		1,546	(A)
3. 2002 Expense		2,803	(A)
		<hr/>	
4. Three Year Average		\$2,007	
5. Company Claim		32,283	(B)
		<hr/>	
6. Recommended Adjustment		\$30,276	
7. Income Taxes @	34.00%	10,294	
		<hr/>	
8. Operating Income		<u>\$19,982</u>	

Sources:

(A) Company Exhibit P-1, page 2 of 3.

(B) Company Exhibit P-3 (Revised), page 2 of 10.

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****STATE INCOME TAXES**

1. Company Claim		(\$8,212)	(A)
2. Recommended Adjustment		(8,212)	(A)
3. Income Taxes @	34.00%	<u>(2,792)</u>	
4. Operating Income		<u>(\$5,420)</u>	

Sources:

(A) Company Exhibit P-3 (Revised), page 2 of 10.

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****DEPRECIATION EXPENSE ADJUSTMENT**

1. Utility Plant In Service Adjustment	(\$97,777)	(A)
2. Depreciation Rate	<u>2.00%</u>	(B)
3. Recommended Adjustment	(\$1,956)	
4. Income Taxes @ 34.00%	<u>(665)</u>	
5. Operating Income	<u>(\$1,291)</u>	

Sources:

(A) Schedule ACC-5W.

(B) Company Workpaper [f].

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****INTEREST SYNCHRONIZATION**

1. Recommended Rate Base	\$555,994	(A)
2. Weighted Cost of Debt	<u>4.31%</u>	(B)
3. Pro Forma Interest Expense	\$23,975	
4. Company Claim	<u>29,760</u>	(C)
5. Increase in Taxable Income	\$5,785	
6. Income Taxes @ 34.00%	<u>\$1,967</u>	

Sources:

(A) Schedule ACC-2W.

(B) Schedule ACC-3W.

(C) Based on Company's claimed rate base and cost of debt.

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****INCOME TAX FACTOR**

1. Revenue	100.00%	
2. State Income Tax Rate	<u>0.00%</u>	
3. Federal Taxable Income	100.00%	
4. Income Taxes @ 34%	<u>34.00%</u>	(A)
5. Net Income	66.00%	
6. Total Tax Rate	<u>34.00%</u>	

Sources:

(A) Rate per Company workpaper [g].

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****REVENUE MULTIPLIER**

1. Revenue		100.00	
2. GR&FT	14.06%	14.06	(A)
3. Uncollectible Expense	1.41%	<u>1.41</u>	(B)
4. State Taxable Income		84.53	
5. State Income Taxes @	0.00%	<u>0.00</u>	
6. Federal Taxable Income		84.53	
7. Federal Income Taxes @	34.00%	<u>28.74</u>	(C)
8. Net Income		55.79	
9. Revenue / Income		<u>1.792452</u>	(D)

Sources:

(A) Rate per Company Workpaper [e].

(B) Derived from Company Exhibit P-3 (Revised), page 2 of 10.

(C) Reflects statutory income tax rate.

(D) Line 1 / Line 8.

MONTAGUE WATER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

PRO FORMA INCOME STATEMENT

	Per Company	Recommended Adjustments	Pro Forma Present Rates	Recommended Rate Adjustment	Pro Forma Proposed Rates
1. Operating Revenues	\$267,292	\$5,919	\$273,211	\$24,318	\$297,529
2. Operating Expenses	233,642	(87,668)	145,974	342	146,317
3. Depreciation and Amortization	37,933	(1,956)	35,977	0	35,977
4. Taxes Other Than Income	57,219	(297)	56,922	3,420	60,342
5. Taxable Income Before Interest Expenses	(\$61,502)	\$95,839	34,337	\$20,556	\$54,893
6. Interest Expense	29,760	(5,785)	23,975	0	23,975
7. Taxable Income	(\$91,262)	\$101,624	10,362	\$20,556	\$30,918
8. Income Taxes @ 34.00%	(36,443)	39,966	3,523	6,989	10,512
9. Net Operating Income	(\$25,059)	\$55,873	\$30,814	\$13,567	\$44,381
10. Rate Base	\$690,141		\$555,994		\$555,994
11. Rate of Return	<u>-3.63%</u>		<u>5.54%</u>		<u>7.98%</u>

MONTAGUE WATER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****REVENUE REQUIREMENT IMPACT OF ADJUSTMENTS**

1. Rate of Return	(\$3,661)
2. Gross Utility Plant in Service	(13,988)
3. Cash Working Capital	(5,201)
4. Operating Revenue	(5,299)
5. Salaries and Wages - Maintenance	(13,395)
6. Salaries and Wages - General	(4,065)
7. Payroll Taxes	(1,336)
8. Employee Benefits Expenses	(1,222)
9. Rate Case Expense	(29,219)
10. Outside Services - Other	(20,713)
11. Miscellaneous Expenses	(35,817)
12. Income Taxes - State	9,715
13. Depreciation Expense	(2,313)
14. Interest Synchronization	3,525
15. Revenue Multiplier	<u>(14,571)</u>
16. Total Adjustments	(\$137,560)
17. Company Claim	<u>161,880</u>
18. Pro Forma Deficiency	\$24,320
17. Present Rate Revenue	\$273,897
18. Percent Increase	8.88%

MONTAGUE SEWER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

REVENUE REQUIREMENT SUMMARY

	Company Claim	Recommended Adjustment	Recommended Position	
	(A)			
1. Pro Forma Rate Base	\$260,914	(\$73,374)	\$187,540	(B)
2. Cost of Capital	8.30%	-0.32%	7.98%	(C)
3. Required Return	\$21,665	(\$6,697)	\$14,968	
4. Operating Income @ Present Rates	(121,459)	132,549	11,090	(D)
3. Operating Income Deficiency	\$143,124	(\$139,246)	\$3,878	
6. Revenue Multiplier	1.9660		1.7891	(E)
7. Revenue Requirement Increase	<u>\$281,387</u>	<u>(\$274,449)</u>	<u>\$6,938</u>	
8. Increase Over Present Service Rates			<u>6.67%</u>	(F)

Sources:

(A) Company Exhibit P-3 (Revised), page 3 of 10 and Exhibit P-4 (Revised), page 3 of 5.

(B) Schedule ACC-2S.

(C) Schedule ACC-3S.

(D) Schedule ACC-4S.

(E) Schedule ACC-19S.

(F) Based on pro forma sewer revenues of \$104,026.

MONTAGUE SEWER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

RATE BASE SUMMARY

	Company Claim	Recommended Adjustment	Recommended Position	
	(A)			
1. Gross Utility Plant in Service	\$520,016	\$0	\$520,016	
2. Accumulated Depreciation	(183,273)	0	(183,273)	
3. Net Utility Plant	\$336,743	\$0	\$336,743	
Less:				
4. Contributions in Aid of Construction	(\$108,790)	\$0	(\$108,790)	
5. Accumulated Deferred Income Taxes	(61,625)	0	(61,625)	
6. Customer Deposits	(11,018)	0	(11,018)	
7. Plant Acquisition Adjustment	29,673	0	29,673	
Plus:				
8. Post Test Year Additions	\$35,435	(\$35,435)	\$0	(B)
9. Cash Working Capital	37,939	(37,939)	0	(C)
10. Water Service Corporation	2,557	0	2,557	
11. Net Utility Plant	<u>\$260,914</u>	<u>(\$73,374)</u>	<u>\$187,540</u>	

Sources:

(A) Company Exhibit P-4 (Revised), page 3 of 5.

(B) Schedule ACC-5S.

(C) Schedule ACC-6S.

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****REQUIRED RETURN**

	Capital Structure Amount	Capital Structure Percent (A)	Cost Rate	Weighted Cost
1. Common Equity (B)	\$77,650,144	40.77%	9.00%	3.67%
2. Long Term Debt -Current	112,819,616	59.23%	7.28%	4.31%
3. Total Cost of Capital	\$190,469,760	100.00%		<u>7.98%</u>

Sources:

(A) Derived from W/P [h-1].

(B) Cost Rate Based on Recommendation of Ms. Crane.

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****OPERATING INCOME SUMMARY**

		Schedule No.
1. Company Claim	(\$121,459)	
Recommended Adjustments:		
2. Repair and Maintenance Expense	123,081	7
3. Salaries and Wages - Maintenance	2,893	8
4. Salaries and Wages - General	878	9
5. Payroll Taxes	289	10
6. Employee Benefits Expenses	264	11
7. Rate Case Expense	6,693	12
8. Outside Services - Other	4,445	13
9. Miscellaneous Expenses	7,739	14
10. Income Taxes - State	(13,125)	15
11. Depreciation Expense	468	16
12. Interest Synchronization	<u>(1,076)</u>	17
13. Net Operating Income	<u>\$11,090</u>	

MONTAGUE SEWER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

UTILITY PLANT IN SERVICE ADJUSTMENTS

1. Post Test Year Plant Claim	\$35,435	(A)
2. Recommended Adjustment	<u>(\$35,435)</u>	

Sources:

(A) Company Exhibit P-4 (Revised), page 3 of 5.

MONTAGUE SEWER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

CASH WORKING CAPITAL

1. Company Claim	\$37,939	(A)
2. Recommended Adjustment	<u>(\$37,939)</u>	

Sources:

(A) Company Exhibit P-4 (Revised), page 3 of 5.

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****MAINTENANCE AND REPAIR EXPENSE**

1. Pro Forma Recommended Expense		\$21,932	(A)
2. Company Claim		<u>208,418</u>	(B)
3. Recommended Adjustment		\$186,486	
4. Income Taxes @	34.00%	<u>63,405</u>	
5. Operating Income		<u>\$123,081</u>	

Sources:

(A) Testimony of Mr. Woods.

(B) Company Exhibit P-3 (Revised), page 3 of 10.

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****SALARIES AND WAGES-MAINTENANCE**

1. Actual 2003 Salaries and Wages		\$20,241	(A)
2. Increases @	3.00%	<u>607</u>	(B)
3. Pro Forma Salaries		\$20,848	
4. Company Claim		<u>25,232</u>	(A)
5. Recommended Adjustment		\$4,384	
6. Income Taxes @	34.00%	<u>1,490</u>	
7. Operating Income		<u>\$2,893</u>	

Sources:

(A) Company Exhibit P-3, Revised, page 3 of 10.

(B) 3% increase per testimony of Ms. Weeks, page 5.

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****SALARIES AND WAGES-GENERAL EXPENSES**

1. Actual 2003 Salaries and Wages		\$3,935	(A)
2. Increases @	3.00%	<u>118</u>	(B)
3. Pro Forma Salaries		\$4,053	
4. Company Claim		<u>5,384</u>	(A)
5. Recommended Adjustment		\$1,331	
6. Income Taxes @	34.00%	<u>453</u>	
7. Operating Income		<u>\$878</u>	

Sources:

(A) Exhibit P-3, Revised, page 3 of 10.

(B) 3% increase per testimony of Ms. Weeks, page 5.

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****PAYROLL TAX EXPENSE**

1. Pro Forma Salary Adjustments		\$5,715	(A)
2. Payroll Taxes @	7.65%	437	(B)
3. Income Taxes @	34.00%	149	
		<hr/>	
4. Operating Income		<u>\$289</u>	

Sources:

(A) Schedules ACC-8S and ACC-9S.

(B) Reflects statutory rate.

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****EMPLOYEE BENEFITS EXPENSE**

1. Pro Forma Salary Adjustments		\$5,715	(A)
2. Pension and 401K Rate	7.00%	400	(B)
3. Income Taxes @	34.00%	<u>136</u>	
4. Operating Income		<u>\$264</u>	

Sources:

(A) Schedules ACC-8S and ACC-9S.

(B) Reflects 3% pension rate and 4% 401K rate.

MONTAGUE SEWER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

RATE CASE EXPENSES

1. Company Rate Case Claim		\$157,481	(A)
2. Proposed Amortization Period		<u>3</u>	(A)
3. Annual Amortization		\$52,494	
4. Percent to Sewer		<u>28.28%</u>	(A)
5. Allocation to Sewer		\$14,845	
6. Sharing with Shareholders		<u>50%</u>	(B)
7. Pro Forma Annual Expense		\$7,422	
8. Company Claim		<u>17,564</u>	(C)
9. Recommended Adjustment		\$10,142	
10. Income Taxes @	34.00%	<u>3,448</u>	
11. Operating Income		<u>\$6,693</u>	

Sources:

(A) Company Workpaper [d].

(B) Reflects 50/50 sharing.

(C) Derived from Company Workpaper [d].

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****OUTSIDE SERVICES**

1. 2000 Expense	\$5,067	(A)
2. 2001 Expense	1,780	(A)
3. 2002 Expense	2,809	(A)
	<hr/>	
4. Three Year Average	\$3,219	
5. Company Claim	9,953	(B)
	<hr/>	
6. Recommended Adjustment	\$6,734	
7. Income Taxes @ 34.00%	2,290	
	<hr/>	
8. Operating Income	<u>\$4,445</u>	

Sources:

(A) Company Exhibit P-1, page 3 of 3.

(B) Company Exhibit P-3 (Revised), page 3 of 10.

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****MISCELLANEOUS EXPENSES**

		2,375	
1. 2000 Expense		\$660	(A)
2. 2001 Expense		610	(A)
3. 2002 Expense		1,105	(A)
		<hr/>	
4. Three Year Average		\$792	
5. Company Claim		12,517	(B)
		<hr/>	
6. Recommended Adjustment		\$11,725	
7. Income Taxes @	34.00%	3,987	
		<hr/>	
8. Operating Income		<u>\$7,739</u>	

Sources:

(A) Company Exhibit P-1, page 3 of 3.

(B) Company Exhibit P-3 (Revised), page 3 of 10.

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****STATE INCOME TAXES**

1. Company Claim		(\$19,886)	(A)
2. Recommended Adjustment		(19,886)	(A)
3. Income Taxes @	34.00%	<u>(6,761)</u>	
4. Operating Income		<u>(\$13,125)</u>	

Sources:

(A) Company Exhibit P-3 (Revised), page 3 of 10.

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****DEPRECIATION EXPENSE ADJUSTMENT**

1. Utility Plant In Service Adjustment	\$35,435	(A)
2. Depreciation Rate	<u>2.00%</u>	(B)
3. Recommended Adjustment	\$709	
4. Income Taxes @ 34.00%	<u>241</u>	
5. Operating Income	<u>\$468</u>	

Sources:

(A) Schedule ACC-5S.

(B) Company Workpaper [f].

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****INTEREST SYNCHRONIZATION**

1. Recommended Rate Base	\$187,540	(A)
2. Weighted Cost of Debt	<u>4.31%</u>	(B)
3. Pro Forma Interest Expense	\$8,087	
4. Company Claim	<u>11,251</u>	(C)
5. Increase in Taxable Income	\$3,164	
6. Income Taxes @ 34.00%	<u>\$1,076</u>	

Sources:

(A) Schedule ACC-2S.

(B) Schedule ACC-3S.

(C) Based on Company's claimed rate base and cost of debt.

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****INCOME TAX FACTOR**

1. Revenue	100.00%	
2. State Income Tax Rate	<u>0.00%</u>	
3. Federal Taxable Income	100.00%	
4. Income Taxes @ 34%	<u>34.00%</u>	(A)
5. Net Income	66.00%	
6. Total Tax Rate	<u>34.00%</u>	

Sources:

(A) Rate per Company workpaper [g].

MONTAGUE SEWER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

REVENUE MULTIPLIER

1. Revenue		100.00	
2. GR&FT	14.06%	14.06	(A)
3. Uncollectible Expense	1.25%	<u>1.25</u>	(B)
4. State Taxable Income		84.69	
5. State Income Taxes @	0.00%	<u>0.00</u>	
6. Federal Taxable Income		84.69	
7. Federal Income Taxes @	34.00%	<u>28.79</u>	(C)
8. Net Income		55.89	
9. Revenue / Income		<u>1.789102</u>	(D)

Sources:

(A) Rate per Company Workpaper [e].

(B) Derived from Company Exhibit P-3 (Revised), page 3 of 10.

(C) Reflects statutory income tax rate.

(D) Line 1 / Line 8.

MONTAGUE SEWER COMPANY

TEST PERIOD ENDING DECEMBER 31, 2003

PRO FORMA INCOME STATEMENT

	Per Company	Recommended Adjustments	Pro Forma Present Rates	Recommended Rate Adjustment	Pro Forma Proposed Rates
1. Operating Revenues	\$103,790	\$0	\$103,790	\$6,938	\$110,728
2. Operating Expenses	282,384	(221,202)	61,182	87	61,269
3. Depreciation and Amortization	9,983	(709)	9,274	0	9,274
4. Taxes Other Than Income	21,129	(437)	20,692	976	21,667
5. Taxable Income Before Interest Expenses	(\$209,706)	\$222,348	12,642	\$5,876	\$18,517
6. Interest Expense	11,251	(3,164)	8,087	0	8,087
7. Taxable Income	(\$220,957)	\$225,512	4,555	\$5,876	\$10,430
8. Income Taxes @ 34.00%	(88,248)	89,797	1,549	1,998	3,546
9. Net Operating Income	(\$121,458)	\$132,551	\$11,093	\$3,878	\$14,971
10. Rate Base	\$260,914		\$187,540		\$187,540
11. Rate of Return	<u>-46.55%</u>		<u>5.92%</u>		<u>7.98%</u>

MONTAGUE SEWER COMPANY**TEST PERIOD ENDING DECEMBER 31, 2003****REVENUE REQUIREMENT IMPACT OF ADJUSTMENTS**

1. Rate of Return	(\$1,504)
2. Gross Utility Plant in Service	(5,060)
3. Cash Working Capital	(5,417)
4. Repair and Maintenance Expense	(220,204)
5. Salaries and Wages - Maintenance	(5,176)
6. Salaries and Wages - General	(1,572)
7. Payroll Taxes	(516)
8. Employee Benefits Expenses	(472)
9. Rate Case Expense	(11,975)
10. Outside Services - Other	(7,952)
11. Miscellaneous Expenses	(13,845)
12. Income Taxes - State	23,482
13. Depreciation Expense	(837)
14. Interest Synchronization	1,925
15. Revenue Multiplier	<u>(25,324)</u>
16. Total Adjustments	(\$274,449)
17. Company Claim	<u>281,387</u>
18. Pro Forma Deficiency	\$6,938
17. Present Rate Revenue	\$104,026
18. Percent Increase	6.67%

APPENDIX C

Referenced Data Requests:

RAR-2

RAR-3

RAR-12

RAR-26

RAR-E-2

SR-14W

SR-14S

**I/M/O the Petition of Montague Water and Sewer Companies
for an Increase in Rates for Water and Sewer Service
and for a Phase II Increase in Rates for Sewer Service
BPU Docket Nos. WR02121034 (Water) & WR03121035 (Sewer)**

Ratepayer Advocate's Initial Discovery Requests

Note: Unless otherwise noted, all information should be provided separately for water and sewer operations.

RAR-2 Please provide, by customer class, the number of customers at December 31, 1999, 2000, 2001, 2002, and 2003.

Response: (Kirsten E. Weeks)

Please see the attached customer count.

Montague Water and Sewer Companies
 BPU Docket Nos. WR03121034 and WR03121035
 Ratepayer Advocate's Initial Discovery Requests
 RAR-2

	27001	27002	27004	27005	27006	27007	27008	27021	27022	27023
	5/8" Residential Water	3/4" Residential Water	Fire Hydrants	1 1/2" Residential Water	Water	2" Commercial Water	3" Commercial Water	5/8" Residential Sewer	3" Clubhouse	3/4" Residential Sewer
12/31/1999	622	41	1	1	4	-	1	258	1	16
12/31/2000	624	44	1	2	4	-	1	258	1	16
12/31/2001	625	44	1	2	4	-	1	258	1	16
12/31/2002	638	44	1	2	4	1	1	259	1	16
12/31/2003	706	.*	1	.*	4	1	1	275	1	.*

*These accounts were likely included in the 5/8" Water and 5/8" Sewer totals. We are investigating.

**I/M/O the Petition of Montague Water and Sewer Companies
for an Increase In Rates for Water and Sewer Service and for
a Phase II Increase in Rates For Sewer Service
BPU Docket Nos. WR03121034 (Water) & WR02131035 (Sewer)**

**Montague Water and Sewer Companies' Responses
to the Ratepayer Advocate's Initial Requests**

RAR-3 Please provide, by customer class, the a) water sales and b) sewer usage for each of the past five years.

RESPONSE: (Kirsten E. Weeks)

- a) Please see attached.
- b) Sewer usage is not metered.

Mohague Water Company
Water Sales by Customer Class

Billing Code	Billing Description	2003	2002	2001	2000	1999	Total
27001	Residential	229,783.31	261,791.03	241,660.53	199,872.44	118,183.04	1,051,290.35
27002	Clubhouse (no longer in use)		23,679.84	20,965.45	14,530.19	10,378.00	69,553.48
27004	Fire Hydrant	5,197.50	6,142.50	5,670.00	4,590.14	2,600.00	24,200.14
27006	Residential (no meter)	1,634.40	2,090.94	2,179.20	3,644.61	3,527.96	13,077.11
27007	2" Meter		1,217.30				1,217.30
27008	3" Meter		2,865.60				2,865.60
27011					(15,051.48)		(15,051.48)
27012					(1,426.98)		(1,426.98)
27016					(399.56)		(399.56)
27024					(357.50)		(357.50)
	SPECIAL One-Time Customer		1,151.30				1,151.30
	Total	236,615.21	298,938.51	270,475.18	205,401.86	134,689.00	1,146,119.76

NOTE: As shown above, some bill codes are incorrect. Upon entry into the General Ledger, some bill codes were miskeyed. As a result, 27011 should be 27001; 27012 should be 27002; 27016 should be 27016; and 27024 should be 27004.

**I/M/O the Petition of Montague Water and Sewer Companies
for an Increase in Rates for Water and Sewer Service
and for a Phase II Increase in Rates for Sewer Service
BPU Docket Nos. WR02121034 (Water) & WR03121035 (Sewer)**

Ratepayer Advocate's Initial Discovery Requests

RAR-12 Please explain why Stephen Vold, whose salary is shown under Maintenance, is not allocated to Montague while Charles Madison, whose total annualized salary is not shown, is allocated to Montague. Has Mr. Madison replaced Mr. Vold? If so, please provide Mr. Madison's total annualized salary.

Response: (Kirsten Weeks)

The operator allocation line should actually read for Stephen Vold rather than Charles Madison, as it is Stephen Vold's salary that is being allocated. Mr. Madison no longer works for Montague Water and Sewer Companies.

**I/M/O the Petition of Montague Water and Sewer Companies
for an Increase In Rates for Water and Sewer Service and for
a Phase II Increase in Rates For Sewer Service
BPU Docket Nos. WR03121034 (Water) & WR02131035 (Sewer)**

**Montague Water and Sewer Companies' Responses
to the Ratepayer Advocate's Initial Requests**

RAR-26 For each capital project shown in W/P(j), please provide a) the start date of the project, and b) the projected completion date.

RESPONSE: (Tony L. Sharp)

Project Name	Start Date	Projected Completion Date
True Tract Extension	April 2004	June 2004
Armstrong Extension	April 2004	June 2004
Leach Fields 3A/3B	March 2004	November 2004
Montague Pre-Engineering	April 2003	January 2004
Build Road to Plant	Completed	Completed
Replace Meters	April 2004	May 2004

**I/M/O the Petition of Montague Water and Sewer Companies
for an Increase in Rates for Water and Sewer Service
and for a Phase II Increase in Rates for Sewer Service
BPU Docket Nos. WR03121034 (Water) & WR03121035 (Sewer)**

Ratepayer Advocate's Engineering Discovery Requests

RAR-E-2 Please provide, or make available for inspection, full and complete copies of the most recent engineering reports describing the condition of the existing disposal beds and/or offering explanations of the failure of those beds.

RESPONSE: (Supplemental) (Tony L. Sharp)

Attached is a supplement for the response provided earlier.

CLIENT: UTILITIES INC. OF MARYLAND
PROJECT: MONTAGUE WATER AND SEWER COMPANY
LOCATION: MONTAGUE, NEW JERSEY

RECORDED PRECIPITATION AT USGS MONTAGUE, NEW JERSEY RAIN GAUGE STATION FOR JANUARY 2003 TO DECEMBER 2003	
MONTH / 2003	RAINFALL (inches)
JAN.	1.67
FEB.	2.04
MAR.	3.51
APR.	1.60
MAY	1.33
JUNE	6.20
JULY	3.12
AUG.	5.33
SEPT.	7.62
OCT.	3.22
NOV.	3.45
DEC.	4.94
TOTAL RAINFALL (inches):	44.03

**I/M/O The Petition of Montague Water and Sewer Companies
For an Increase in Rates for Water and Sewer Service
And For a Phase II Increase in Rates for Sewer Service
BPU Docket No. WR03121034
BPU Docket No. WR03121035**

BPU Staff Initial Interrogatories

SR-14w Please provide a copy of Petitioner's Federal Income Tax Returns for the years 2001, 2002 and when available 2003.

RESPONSE: (Kirsten E. Weeks)

Petitioners do not file separate income tax returns.

**I/M/O The Petition of Montague Water and Sewer Companies
For an Increase in Rates for Water and Sewer Service
And For a Phase II Increase in Rates for Sewer Service
BPU Docket No. WR03121034
BPU Docket No. WR03121035**

BPU Staff Initial Interrogatories

SR-14s Please provide a copy of Petitioner's Federal Income Tax Returns for the years 2001, 2002 and when available 2003.

RESPONSE: (Kirsten E. Weeks)

Petitioners do not file separate income tax returns.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

Application of Water Service Corporation)
of Kentucky for a General Adjustment)
in Existing Rates)

Case No. 2013-00237

REBUTTAL TESTIMONY OF LOWELL YAP

1 **Q. Please state your name, occupation and business address for the record.**

2 A. My name is Lowell Yap. I am employed as a Regulatory Accountant at Utilities, Inc.,
3 2335 Sanders Road, Northbrook, Illinois 60062.

4 **Q. What is the purpose of your rebuttal testimony?**

5 A. I am responding to the direct testimony of Ms. Andrea C. Crane filed on behalf of the
6 Office of Attorney General.

7 **Q. In your testimony filed with WSCK's application in this matter, you indicated that**
8 **WSCK provided water service to approximately 7,362 customers in Hickman and Bell**
9 **counties. In response to Item 1 of the Attorney General's Initial Request for Information,**
10 **WSCK stated that it provides water service to 6,507 customers. Why are these customer**
11 **counts different?**

12 A. The reference to 7,362 customers in my direct testimony filed with WSCK's application
13 was actually a reference to the Equivalent Residential Customers allocation factor for WSCK.
14 My direct testimony should be amended to reflect this change.

15 **Q. Ms. Crane proposes to treat WSCK uncollectible costs as an operating expense as**
16 **opposed to an operating revenue reduction. Do you agree with this change?**

17 A. WSCK does not object to this change.

18 **Q. On lines 11 thru 15 on page 29 of her testimony, Ms. Crane states, "Similarly, I do**
19 **not believe that my earlier adjustment to non-labor indirect costs is duplicative with the**
20 **Company's miscellaneous expense adjustment. However, if the Company demonstrates**
21 **that it has already removed any of the miscellaneous expenses or non-labor indirect costs**
22 **that are subject of adjustments in my testimony, then I will revise my adjustments**

1 **accordingly.” Can you identify any adjustments that Ms. Crane made that are**
2 **duplicative?**

3 A. Yes. The Company believes that Ms. Crane’s adjustment to non-labor indirect costs
4 are duplicative to what was already done in the removal of \$12,945 of costs that the Company
5 illustrated in its w/p [r].

6 **Q. Do you agree with her removal in non-labor costs relating to certain memberships,**
7 **travel costs, fines and penalties, and other costs in her Schedule ACC-6?**

8 A. Yes, in part. WSCK shows in Schedule LY-R4 and LY-R4A that certain costs Ms.
9 Crane removes in her Schedule ACC-6 were already removed and, therefore, should not be
10 included in this adjustment. If Ms. Cranes adjustment is allowed, the amount of \$9,004 of the
11 same costs will be removed twice. These calculations are being filed as Attachment A to this
12 testimony.

13 **Q. Ms. Crane recommended that the 3% increase in salary expenses for Water Service**
14 **Corporation employees be eliminated. Do you agree with this adjustment? If not, why do**
15 **you disagree?**

16 A. No, I disagree with Ms. Crane’s recommendation for several reasons that are discussed in
17 the responses that follow. First and foremost, Ms. Crane’s rationale is based on a faulty premise.
18 On page 14 of her testimony, Ms. Crane maintains that the 3% increase in salary expense should
19 be disallowed because the expense occurred outside of the test year and suggests that post-test
20 year adjustments should be disallowed. This position is inconsistent with general ratemaking
21 principles that allow utilities to make pro forma adjustments for known and measureable changes
22 to the test-year operations.

1 In response to Item 50 of the Attorney General’s Initial Request for Information, WSCK
2 identified the actual salary increases for 2013. The information provided in that response
3 demonstrates that the employees who were employed by WSC in 2012 and 2013 received total
4 annualized salaries of \$ 5,519,347 as of December 31, 2012, and those same employees received
5 annualized salaries of \$ 5,777,606 as of December 13, 2013. This adjustment reflects a known
6 and measurable change of 5.25% above the 2012 salary expenses.

7 **Q. How do you respond to Ms. Crane’s statement that some employees received more**
8 **than a 3% salary increase, while others received less than a 3% increase?**

9 A. It is not clear how this fact impacts Ms. Crane’s testimony. The WSC employee’s salary
10 increases vary, but as the testimony above indicates, the total expense is greater than the expense
11 that WSCK initially proposed to include with in rates.

12 It should be noted, however, that the company’s award of salary increases is partly based on
13 performance by individual employees. This method of rewarding high-performing employees is
14 generally regarded as a best practice in human resources management because it helps improve
15 employee efficiency.

16 **Q. On lines 4 and 5 of page 15 of her testimony, Ms. Crane states that “WSCK has**
17 **failed to provide evidence in this case that would justify violating the test year concept by**
18 **including a post-test year expense adjustment.” Is this true?**

19 A. No. In fact, Ms. Crane admits—a mere five lines later—that WSCK has identified the
20 actual salary increases that the company has granted to its employees in 2013. This information
21 was filed in this case in response to Item 50 of the Attorney General’s Initial Request for
22 Information. Thus, WSCK has provided evidence in this case that demonstrates known and
23 measurable pro forma adjustments that should be made to WSCK’s operation expenses.

1 **Q. Ms. Crane suggests that WSCK provides no evidence to support the reasonableness**
2 **of the salary expenses, including the proposed 3% increase. Is this accurate?**

3 A. No, this is not accurate. WSCK supported the reasonableness of its salary expenses with
4 testimony from Gary Shambaugh, who reviewed similarly sized water utilities in Kentucky and
5 demonstrated that the salary expenses allocated to WSCK were lower than the expenses of
6 similarly sized water utilities in Kentucky on a per-customer basis. By keeping its expenses
7 lower than those of similarly sized water utilities in Kentucky, WSCK has provided evidence to
8 support the reasonableness of its salary expenses.

9 **Q. Do you agree with Ms. Crane's suggested adjustment to eliminate the 401(k)**
10 **contributions associated with the 3% salary increase?**

11 A. No. As discussed above, Ms. Crane inaccurately concluded that the 3% salary increase in
12 expenses was not justified because, as she argued, the incorporation of these expenses would
13 violate general ratemaking principles and the utility has failed to provide evidence to support the
14 reasonableness of these expenses. Because the inclusion of expenses into base rates is both
15 consistent with ratemaking principles and WSCK has supported the reasonableness of these
16 expenses, the corresponding 401(k) contribution is similarly appropriate.

17 **Q. Do you agree with Ms. Crane's recommendation to adjust the recoverable rate case**
18 **expense from this case based on an average of the previous two rate cases?**

19 A. No. Every rate case is different and will inevitably incur differing amounts of rate case
20 expense. Unlike the past two rate cases, the Attorney General has sponsored testimony and
21 sought significantly more information from WSCK than in previous cases. As a comparison, the
22 Attorney General and Commission Staff asked a total of 208 data requests, exclusive of subparts,
23 in the present case, and only 89 data requests in WSCK's 2010 rate case. In addition, the

1 Intervenor filed a motion to dismiss, which was ultimately denied by the Commission.
2 Although the arguments contained no legal authority to support the motion to dismiss, WSCK
3 nevertheless had to respond with its own legal brief. These factors would suggest that the
4 expenses of this rate case will be greater than previous rate cases.

5 WSCK has made a good faith effort at striving to reduce costs where it is prudent and reasonable
6 to do so. For example, WSCK retained counsel for this rate case who charges a significantly
7 lower rate—\$225 per hour—than the attorney that handled its last rate case, who charged \$350
8 per hour for his services.

9

10 **Q. What is your position on Ms. Crane’s recommended disallowance of \$160 in**
11 **advertising costs and \$340 in charitable contributions?**

12 A. Although WSCK may disagree with the disallowance of recover of these expenses in
13 rates, it will not object to this adjustment in order to reduce the issues to be resolved in this
14 matter and to expedite this rate case.

15 **Q. Is Ms. Crane’s position on depreciation logically consistent?**

16 A. No, it is not. Ms. Crane argues that WSCK should have conducted a depreciation study if
17 it wanted to change its depreciation rates. In its initial application, WSCK proposed a composite
18 depreciation rate of 2% based on its prior practice, but this composite rate does not appear to
19 have any foundation in a formal study. Thus, there is no logical consistency to demand a study
20 to replace a rate that was not previously based on a study. WSCK supports basing its
21 depreciation rates and expenses on the 1979 NARUC Study that has been identify in this case.
22 WSCK recognizes that the Commission has relied this study in numerous cases. To the extent

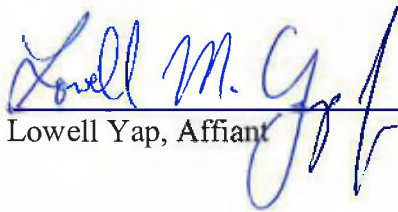
1 that there are assets that are not listed in the study, WSCK proposes using rates approved by the
2 North Carolina Utilities Commission.

3 **Q. Have there been any known and measurable changes to expenses since the filing of**
4 **this general rate application of which the Commission should be aware?**

5 A. WSCK purchases raw water from Fern Lake Company for its Middlesboro operations.
6 The Commission approved Fern Lake Company's rate increase in Case No. 2013-00172. WSCK
7 has filed a purchased water adjustment application with the Commission in Case No. 2014-
8 00065. In that case, WSCK proposed a purchased water adjustment line item for its Middlesboro
9 customers so as to simplify the process. If the line item is approved by the Commission in that
10 case, the increase in purchased water expenses, which are known and measurable expenses,
11 would not need to be considered in this general rate case.

AFFIDAVIT

The undersigned, Lowell Yap, being duly sworn, deposes and says that he is the Regulatory Accountant of Utilities, Inc., that is authorized to submit this testimony on behalf of Water Service Corporation of Kentucky, and that the information contained in the testimony is true and accurate to the best of his knowledge, information and belief, after reasonable inquiry, and as to those matters that are based on information provided to him, he believes to be true and correct.



Lowell Yap, Affiant

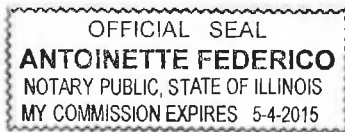
NOTARY CERTIFICATE

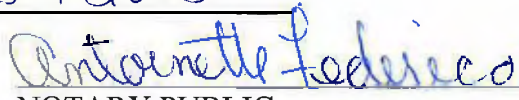
STATE OF ILLINOIS

COUNTY OF COOK

Subscribed, acknowledged and sworn to before me by Lowell M. Yap Jr. on this 20th day of March, 2014.

My commission expires: 5-4-2015





NOTARY PUBLIC

Water Service Corporation of Kentucky
Case No. 2013 - 00237
Test Year 12/31/2012
Revenue Requirement Summary

Appendix A
Schedule LY-R1

	WSSCK Pro Forma Present Rates	WSSCK Rebuttal Pro Forma Adjustment		WSSCK Rebuttal Pro Forma Present	WSSCK Rebuttal Proposed Adjustment	WSSCK Rebuttal Pro Forma Proposed
Operating Revenues						
Service Revenues - Water	\$2,103,813			\$2,103,813	\$184,952 (J)	\$2,288,765
Service Revenues - Sewer						
Miscellaneous Revenues	78,995			78,995		78,995
Uncollectible Accounts	(38,028)	38,028 (A)		0		0
Total Operating Revenues	\$2,144,780	\$38,028		\$2,182,808	\$184,952	\$2,367,760
Maintenance Expenses						
Salaries and Wages	519,099	(\$1,133) (B)		517,966		517,966
Purchase Water/Sewer	85,200			85,200		85,200
Purchased Power	95,111			95,111		95,111
Maintenance and Repair	98,163			98,163		98,163
Maintenance testing	34,092			34,092		34,092
Meter Reading	0			0		0
Chemicals	145,421			145,421		145,421
Transportation	34,774			34,774		34,774
Operating Exp. Charged to Plant	(163,869)			(163,869)		(163,869)
Outside Services - Other	30,001			30,001		30,001
Total	\$877,992	(\$1,133)		\$876,859	\$0	\$876,859
General Expenses						
Salaries and Wages	\$173,648	\$0 (B)		\$173,648		\$173,648
Office Supplies & Other Office Exp.	79,610			79,610		79,610
Regulatory Commission Exp.	73,660	(16,656) (C)		57,004		57,004
Pension & Other Benefits	160,716	(79) (D)		160,637		160,637
Rent	6,254			6,254		6,254
Insurance	63,192			63,192		63,192
Office Utilities	54,273			54,273		54,273
Bad Debt Expense	0	38,028 (A)		38,028	3,348	41,376
Service Company - Allocated Expenses	0	(12,904) (E)		(12,904)		(12,904)
Miscellaneous	12,173	(500) (F)		11,673		11,673
Total	\$623,526	\$7,888		\$631,414	\$3,348	\$634,762
Depreciation	\$281,828			\$281,828		\$281,828
Amortization of PAA	0			0		0
Taxes Other Than Income	144,063	(87) (G)		143,976	293	144,269
Expense Reduction Related to Clinton Sewer Ops	(120,708)	(9,583) (H)		(130,291)		(130,291)
Income Taxes - Federal	54,491	13,086 (I)		67,577	57,947	125,524
Income Taxes - State	10,230	2,456 (I)		12,686	10,879	23,565
Amortization of CIAC	(4,229)			(4,229)		(4,229)
Total	\$365,675	\$5,872		\$371,547	\$69,119	\$440,666
Total Operating Expenses	\$1,867,193	\$12,628		\$1,879,821	\$72,466	\$1,952,287
Net Operating Income	\$277,587	\$25,400		\$302,987	\$112,486	\$415,473
Other Income	0			0		0
Interest During Construction	(1,730)			(1,730)		(1,730)
Interest on Debt	171,809			171,809		171,809
Net Income	\$ 107,508	\$ 25,400		\$ 132,908	\$ 112,486	\$ 245,394

Sources:

- (A) Bad Debt Expenses transferred from revenue reduction to expense increase.
- (B) Schedule LY-R2
- (C) Schedule ACC-4.
- (D) Schedule LY-R3
- (E) Schedule LY-R4

- (F) Schedule ACC-7.
- (G) Schedule LY-R5.
- (H) Schedule ACC-10.
- (I) Schedule ACC-11.
- (J) Schedule LY-R6

**Water Service Corporation of Kentucky
Case No. 2013 - 00237
Test Year 12/31/2012
Salaries and Wages**

Appendix A
Schedule LY-R2

	Maintenance <u>Expenses</u>		General <u>Expenses</u>	
1. Per Company Filing	\$519,099	(A)	\$173,648	(A)
2. Rebuttal position pro forma salaries	517,966		173,648	
3. Adjustment	<u>(1,133)</u>	(B)	<u>\$0</u>	

Sources:

(A) Company Filing, Schedule B, page 1 and w/p [b].

General Expenses including CSRs and Corporate costs.

(B) 38,883 - (38,883/1.03) - Erroneous extra salary increase for Operations Employee 11

**Water Service Corporation of Kentucky
Case No. 2013 - 00237
Test Year 12/31/2012
Pension and Other Benefits**

Appendix A
Schedule LY-R3

1. Company Rebuttal Salary and Wage Expense Adjustment	(\$1,133) (A)
2. Total 401K Contribution Rate	<u>7.00%</u> (B)
3. Pension and Other Benefits Adjustment	<u>(\$79)</u>

Sources:

(A) Schedule LY-R2.

(B) Company Filing, w/p [b].

-

Water Service Corporation of Kentucky
Case No. 2013 - 00237
Test Year 12/31/2012
Service Company - Allocated Expenses

Appendix A
Schedule LY-R4

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
Allocated Expenses:	Removal of Expenses by AG - Schedule ACC-6, Column (A)	Total [C] + [F]	Difference [A] - [B]	Direct Expenses (AA General Ledger)	Total Direct Expenses already removed, referenced in w/p r and AG DR 2-7	Revised Direct AA amount to be removed = [D] - [E]	Indirect/Allocated Expenses (UA Ledger)	Total Allocated Expenses already removed, referenced in w/p r and AG DR 2-7	Revised Allocated UA amount to be removed = [G] - [H]	Revised Total = [F] + [I]
1. 5810 Memberships	\$5,375	\$5,375	\$0	\$5,132	\$0	\$5,132	\$243	90.03	152.87	\$5,284.67
2. 5815 Penalties/Fines	3	3	-	0	-	-	3	-	3.22	\$3.22
3. 5825 Other Misc. Expenses	1,209	1,209	-	476	200	276	733	7.04	726.27	\$1,001.85
4. 5870 Holiday Events/Picnics	157	157	-	55	55	-	102	25.55	76.03	\$76.03
5. 5890 Public Subscriptions/Tapes	134	134	-	0	-	-	134	-	134.04	\$134.04
6. 6015 Employment Finder Fees	942	942	-	0	-	-	942	-	941.54	\$941.54
7. 6045 Temporary Employees - Clerical	1,453	1,453	-	0	-	-	1,453	-	1,452.58	\$1,452.58
8. 6185 Travel - Lodging	5,380	5,380	-	3,499	2,435	1,064	1,880	861.05	1,019.37	\$2,083.81
9. 6190 Travel - Airfare	1,417	1,417	-	0	-	-	1,417	1,039.05	377.96	\$377.96
10. 6195 Travel - Transportation	1,362	1,362	-	886	477	409	476	431.59	44.06	\$452.96
11. 6200 Travel - Meals	3,749	3,749	-	2,339	1,900	439	1,410	830.90	578.94	\$1,018.05
12. 6205 Travel - Entertainment	558	558	-	0	-	-	558	553.37	5.02	\$5.02
13. 6207 Travel - Other	169	169	-	36	-	36	133	97.17	36.10	\$72.10
14. Subtotal	\$21,907	\$21,907	\$0	\$12,424	\$5,068	\$7,356	\$9,484	\$3,936	\$5,548	\$12,904
15. Corporate Labor, Payroll Taxes, Employee Benefits	167,131 (B)									
16. Corporate Costs Charged to Plant	(29,879) (C)									
17. Total Adjustment per AG	<u>\$159,159</u>									<u>\$ (12,904)</u>

Company Rebuttal Adjustment
(to remove double counting of AG
adjustment and include corporate costs)

Sources:

- [A] From AG Schedule ACC-6, Column (A)
- (B) Company Filing, w/p [b]. Includes salaries, payroll taxes, and related benefits.
- (C) Company Filing, w/p [b-2].
- (E) Ref LY-R4A

Water Service Corporation of Kentucky
Case No. 2013 - 00237
Test Year 12/31/2012
Service Company - Allocated Expenses

Appendix A
Schedule LY-R6A

Account Number	Account Description	Removed by AG in Schedule ACC- 6	Total Cost Center already removed in wp-r	800 Midwest Cost Center	Allocated to WSC of KY	860 State of Ky Cost Center	Allocated to WSC of KY	102 RVP Cost Center	Allocated to WSC of KY	102 UI Cost Center	Allocated to WSC of KY
5810	Memberships	5,374.70	90.03	-	-	-	-	715.47	49.92	1,445.00	40.10
5815	Penalties/Fines	3.22	-	-	-	-	-	-	-	-	-
5825	Other Misc. Expenses	1,208.89	7.04	-	-	-	-	3.23	0.23	245.57	6.82
5870	Holiday Events/Picnics	157.03	25.55	-	-	-	-	-	-	920.55	25.55
5890	Public Subscriptions/Tapes	134.04	-	-	-	-	-	-	-	-	-
6015	Employment Finder Fees	941.54	-	-	-	-	-	-	-	-	-
6045	Temporary Employees - Clerical	1,452.58	-	-	-	-	-	-	-	-	-
6185	Travel - Lodging	5,379.62	861.05	-	-	-	-	1,615.15	112.70	26,964.14	748.35
6190	Travel - Airfare	1,417.01	1,039.05	265.60	57.58	-	-	1,656.60	115.59	31,199.23	865.89
6195	Travel - Transportation	1,361.85	431.59	-	-	-	-	466.04	32.52	14,379.35	399.08
6200	Travel - Meals	3,749.22	830.90	327.85	71.07	-	-	1,440.12	100.48	23,757.26	659.35
6205	Travel - Entertainment	558.39	553.37	-	-	-	-	-	-	19,938.85	553.37
6207	Travel - Other	169.27	97.17	-	-	-	-	155.00	10.82	3,111.45	86.35
		21,907.36	3,935.75	593.45	128.65	-	-	6,051.61	422.25	121,961.40	3,384.85

Cost Center	ERC %
345 WSC - KY	100.00% [1]
800 Midwest Region	21.68% [1]
860 State of KY	100.00% [1]
102 RVP SE/South/West	0.00% [1]
102 RVP Atl/Midwest	6.98% [1]
102 without RVP	2.78% [1]

[1] Per ERC

Water Service Corporation of Kentucky
Case No. 2013 - 00237
Test Year 12/31/2012
Payroll Tax Expense

Appendix A
Schedule LY-R5

1. Salary and Wage Expense Adjustment	(\$1,133)	(A)
2. FICA Tax Rate	<u>7.65%</u>	(B)
3. Payroll Tax Adjustment	<u>(\$87)</u>	

Sources:

(A) Schedule LY-R2

(B) Company Filing, w/p [b].

**Water Service Corporation of Kentucky
Case No. 2013 - 00237
Test Year 12/31/2012
Regulatory Commission Expense**

Appendix A
Schedule ACC-4

1. Average of Last Two Cases	\$143,506	(A)
2. Unamortized Costs from Last Case	<u>27,505</u>	(B)
3. Total Pro Forma Rate Case Costs	\$171,011	
4. Requested Amortization Period (Yrs.)	<u>3</u>	(B)
5. Annual Amortization	\$57,004	
6. Company Claim	<u>73,660</u>	(B)
7. Recommended Adjustment	<u>\$16,656</u>	

Sources:

(A) Response to AG 1-80.

(B) Company Filing, w/p [d].

Appendix B
Schedule ACC-11

Water Service Corporation of Kentucky
Case No. 2013 - 00237
Test Year 12/31/2012
Income Tax Expenses

1. Pro Forma Revenue Present Rates	\$2,182,808	(A)
2. Pro Forma Expenses	1,799,558	(A)
3. Pro Forma Interest Expense	<u>171,809</u>	(A)
4. Taxable Income	\$211,441	
5. State Taxes @ 6%	<u>12,686</u>	(B)
6. Federal Taxable Income	\$198,755	
7. Federal Taxes @ 34%	<u>67,577</u>	(B)
8. Total Income Taxes	<u>\$80,263</u>	

Sources:

(A) Schedule ACC-1.

(B) Reflects statutory income tax rate, per Company Filing, w/p [g].

Water Service Corporation of Kentucky
Case No. 2013 - 00237
Test Year 12/31/2012
Required Revenue Increase

Appendix A
 Schedule LY-R6

	(A)	
1. Operating Expenses	\$1,879,821	
2. Less: State and Federal Income Taxes	80,263	
3. Operating Expenses Net of Income Taxes	<u>\$1,799,558</u>	
4. Divide by Operating Ratio	<u>0.88</u>	(B)
5. Revenue to Cover Operating Ratio	\$2,044,952	
6. Less: Operating Expenses Net of Income Taxes	<u>1,799,558</u>	
7. Net Operating Income After Income Taxes	\$245,394	
8. Current Net Operating Income After Income Taxes	<u>132,908</u>	
9. Net Operating Income Adjustment	-\$112,486	
10. Multiplied by Gross Up Factor	<u>1.644227</u>	(C)
11. Revenue Adjustment (Increase)	<u>(\$184,952)</u>	

Sources:

(A) Schedule LY-R1.

(B) Reflects Commission's 88% Operating Ratio Methodology.

(C) Schedule ACC-14.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

Application of Water Service Corporation)
of Kentucky for a General Adjustment)
in Existing Rates) Case No. 2013-00237

REBUTTAL TESTIMONY OF HELEN LUPTON

1 **Q. Please state your name, present position and business address.**

2 A. My name is Helen Lupton, and I am the Regional Finance Manager for the Atlantic and
3 Midwest Regions of Utilities, Inc. (“UI”), which includes North Carolina, Maryland,
4 Pennsylvania, New Jersey, Virginia, Illinois, Indiana, Kentucky and Tennessee. My
5 business address is 5701 Westpark Drive, Suite 101, Charlotte, NC 28217.

6 **Q. What is the purpose of your rebuttal testimony?**

7 A. I am responding to the direct testimony of Ms. Andrea C. Crane filed on behalf of the
8 Office of Attorney General.

9 **Q. How do you respond to Ms. Crane’s statement that WSCK does not have the ability
10 to accept or reject allocated expenses from affiliates pursuant to the service
11 agreement?**

12 A. Even before Ms. Crane made this written statement, WSCK addressed this issue in
13 response to the Item 13 of the Commission Staff’s Third Request for Information. First
14 and foremost, the service agreement between WSCK and Water Service Corporation has
15 the same substantive provisions as the service agreement from another water utility
16 operating in the state that were supported by the Commission as appropriate mechanisms
17 of oversight. In addition, various levels of oversight within the Utilities, Inc., corporate
18 structure review and approve expenses to ensure that expenses are reasonable and
19 appropriate. These managers understand the allocation process and recognize the
20 implications of their approvals. They have the ability to reject expenses that would be
21 inappropriately or unreasonably incurred.

22 It must also be noted that WSCK has the ability to reject allocated expenses from
23 the inclusion of rates, as it has done in this case. For example, any items that were

24 related expense reports in workpaper w/p [r], which was included in response to Item 3 of
25 the Staff's Initial Request for Information, were removed for rate making purposes. This
26 clearly demonstrates that the utility has the ability to accept and reject allocated expenses
27 from affiliates for the purposes of rates.

AFFIDAVIT

The undersigned, Helen Lupton, being duly sworn, deposes and says that she is the Regional Finance Manager for the Midwest Region of Utilities, Inc., that is authorized to submit this testimony on behalf of Water Service Corporation of Kentucky, and that the information contained in the testimony is true and accurate to the best of her knowledge, information and belief, after reasonable inquiry, and as to those matters that are based on information provided to her, she believes to be true and correct.

Helen Lupton

Helen Lupton, Affiant

NOTARY CERTIFICATE

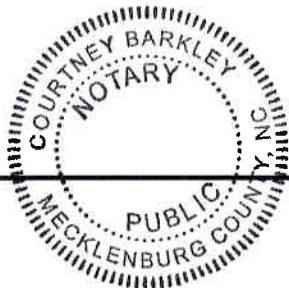
STATE OF NORTH CAROLINA

COUNTY OF Mecklenburg

Subscribed, acknowledged and sworn to before me by Helen Lupton on
this 19 day of March, 2014.

My commission expires: 1/17/2018.

Courtney Barkley
NOTARY PUBLIC



COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

Application of Water Service Corporation)
of Kentucky for a General Adjustment)
in Existing Rates)

Case No. 2013-00237

REBUTTAL TESTIMONY OF GARY D. SHAMBAUGH

Principal & Director
AUS Consultants, Inc.
275 Grandview Avenue, Suite 100
Camp Hill, PA 17011

**AFFILIATE CHARGES –
ALLOCATION OF CORPORATE COSTS**

1 **Q. PLEASE STATE YOUR NAME, JOB TITLE, EMPLOYER, AND BUSINESS**
2 **ADDRESS.**

3 **A.** My name is Gary D. Shambaugh, Principal and Director of AUS Consultants, Inc.
4 located at 275 Grandview Avenue, Suite 100, Camp Hill, PA. 17011.

5

6 **Q. MR. SHAMBAUGH, HAVE YOU PREVIOUSLY SUBMITTED DIRECT**
7 **TESTIMONY IN THIS PROCEEDING?**

8 **A.** Yes.

9

10 **Q. WHAT IS THE NATURE OF YOUR REBUTTAL TESTIMONY IN THIS CASE?**

11 **A.** My rebuttal testimony will address the direct testimony of the Office of Attorney
12 General's witness Andrea C. Crane as it relates to the allocation of corporate
13 service company costs.

14

15 **Q. MR. SHAMBAUGH, DOES YOUR COMPARABLE STUDY OF ALLOCATED**
16 **AFFILIATED CORPORATE COSTS ADDRESS THE COMMISSION'S**
17 **CONCERNS WITH RESPECT TO THE REASONABLENESS OF THOSE**
18 **COSTS ASSIGNED TO WSCK IN THIS PROCEEDING?**

19 **A.** Yes. The Commission previously rejected a study performed by the Company
20 because it did not involve utilities of similar type and size. My comparable study
21 was tailored to meet the Commission's directives at Case No. 2010-00476.

22

1 **Q. MR. SHAMBAUGH, DOES MS. CRANE CRITIZE THE METHOD BY WHICH**
2 **YOU SELECTED YOUR STUDY GROUP OF COMPARABLE SYSTEMS?**

3 **A.** Yes. On page 24, lines 7 through 9 of her direct testimony, Ms. Crane states
4 “Mr. Shambaugh first attempted to justify the corporate labor charges by
5 comparing the average revenues of WSCK with the average revenues in either
6 2011 or 2012 for twelve Kentucky water systems regulated by the Commission.”
7

8 **Q. IS THAT THE PROPER CHARACTERIZATION OF YOUR DIRECT**
9 **TESTIMONY?**

10 **A.** No. The initial step in doing a comparable study is to identify the potential
11 participants for the study. Pursuant to the guidance of the Commission in Case
12 No. 2010-00476, those participants should be of relative size to WSCK. Exhibit
13 C to my direct testimony sets forth the potential twelve (12) systems to be
14 included in my comparable study. Ms. Crane in her direct testimony has focused
15 on the annual revenues in her criticism of my study, while my attention was also
16 directed to the number of customers and other financial operating criteria for
17 each system as compared to WSCK. I determined that the twelve (12) regulated
18 water utilities included in my comparable group were of similar type and size to
19 WSCK. The monthly costs or revenues per customer for each system did raise
20 questions as to why WSCK’s annual revenues were in the low range as
21 compared to the publically owned and regulated utilities included in the group.
22

1 **Q. DOES MS. CRANE DISAGREE WITH YOUR CONTINUED ANALYSIS OF**
2 **TWELVE (12) WATER SYSTEMS IN YOUR STUDY GROUP?**

3 **A.** Yes. Ms. Crane criticizes my “Exhibit D” which includes an analysis of the total
4 salaries and wages of the selected group (Page 1 of 3). Again, this analysis was
5 utilized to determine which of the twelve (12) systems would qualify for inclusion
6 in the final study group. Exhibit D, Page 2, sets forth only the reported salaries
7 and wages – Officers, Directors and majority stock holders for each system. It is
8 important to note that the amount (\$59,748) reported on this schedule for WSCK
9 included administrative salaries and wages and officer’s and director’s salaries.
10 It is interesting to note that WSCK’s cost per customer of \$0.67 is comparable to
11 Southeast Daviess County Water District cost per customer of \$0.75; however,
12 WSCK provides more value and service for less cost per customer. Exhibit D,
13 Page 3 of 3 sets forth the reported total salaries and wages for each system and
14 a comparable average to WSCK’s monthly cost of \$6.22 per customer.

15

16 **Q. MR. SHAMBAUGH, DID YOU REVIEW OTHER OPERATING CRITERIA FOR**
17 **THE TWELVE (12) SYSTEMS?**

18 **A.** Yes. I reviewed the reported operating expenses by major expense category for
19 each of the systems.

20

21 **Q. WHAT WAS THE RESULT OF THAT ANALYSIS?**

1 **A.** WSCK's total water utility operating expense for 2011 amounted to \$1,557,573.
2 The majority of the remaining systems were over \$2.0 million per year with
3 Bullock Pen Water District the highest reported at approximately \$2.7 million.
4

5 **Q. MY. SHAMBAUGH, HOW DID YOU SELECT THE FOUR (4) SYSTEMS**
6 **INCLUDED IN YOUR ANALYSIS AS SET FORTH IN EXHIBIT E?**

7 **A.** I selected the four (4) systems in the comparable group based upon the
8 Commission's adjudication of their salaries and wages as being fair, just and
9 reasonable during the course of setting rates for those systems. Based upon my
10 review of previous commission orders for WSCK, I concluded that it was
11 imperative to create a study group including those systems with litigated rate
12 filings that set forth administrative salaries and wages for comparative purposes.
13 The other criteria for inclusion in the final four (4) study groups was the
14 availability of detailed administrative salaries and wages which would provide an
15 indication of the service provided. The results of that analysis are set forth in my
16 direct testimony and exhibits. Since there are no two water utilities that are
17 exactly alike, it is perfectly acceptable to compare similar sized systems and
18 commission ordered customer rates with WSCK costs allocated based upon the
19 services agreement.
20

21 **Q. DOES MS. CRANE PROVIDE ANY SUPPORT FOR HER RECOMMENDATION**
22 **OF DISALLOWANCE OF AFFILIATED CHARGES IN THIS PROCEEDING?**

1 **A.** No. Ms. Crane states on Page 25, lines 12 through 14, that “While smaller
2 independent systems may not benefit from the economies available to WSCK,
3 such systems are likely to have direct control over their hiring practices and
4 greater local oversight of operations.”

5 For the four (4) systems included in the study group, I believe the
6 economies of scale would provide a greater benefit than any cost savings from
7 local oversight. For example, the Henry County Water District’s monthly cost for
8 commissioner’s salaries, customer accounting and customer collection wages
9 amounts to \$1.88 per month per customer. However, Henry County reports
10 additional 2011 costs of \$80,460 for engineering, accounting and legal, which
11 raises the monthly cost per customer to \$2.95. By comparison, WSCK
12 customers receive the benefit of all those services and more for \$1.55 per month
13 per customer.

14 Based on my experience, independence and local control of a system the
15 size of WSCK brings higher administrative costs and additional costs for outside
16 experts (i.e., accounting, legal, engineers). As Ms. Crane suggests, a smaller
17 utility cannot take advantage of synergies and cost efficiencies. In addition, it is
18 usually economically impractical for a smaller utility to hire full-time professional
19 staff, such as accountants, attorneys, and engineers. WSCK has the advantage
20 of these resources through its corporate affiliation with Utilities, Inc., and its
21 service company. WSCK has recognized cost savings generated by a
22 centralized management team, which has been demonstrated in my study.

1 Moreover, WSCK provided testimony to demonstrate that expenses are
2 reviewed to ensure that they are appropriate and reasonable. Some specific
3 areas where this testimony has been provided includes Helen Lupton's direct and
4 rebuttal testimony and WSCK's responses to Item 13 to the Commission Staff's
5 Third Request for Information.
6

7 **Q. DID MS. CRANE PROVIDE ANY ANALYSIS OR INCLUDE ANY**
8 **COMPARATIVE STUDY WITH HER DIRECT TESTIMONY TO SUPPORT HER**
9 **POSITION IN THIS PROCEEDING?**

10 **A.** No. To the contrary, Ms. Crane admits on Page 25, lines 15 through 18 that
11 "While there are undoubtedly some costs being allocated to WSCK that are
12 necessary for the provision of safe and reliable water service, there is nothing in
13 the Company's testimony to identify the specific services needed or to indicate
14 that the costs for the services actually being provided are reasonable."

15 I agree that WSCK needs to recover their cost of operations or service to
16 WSCK customers will become unsafe and unreliable and WSCK will become a
17 financially non-viable entity. I disagree with the remaining parts of that
18 statement. My direct testimony includes Exhibit A, which is a copy of the
19 operating agreement between the parties. The operating agreement details the
20 exact services available to be provided as required by WSCK, which include
21 corporate management, engineering, operations, legal, billing and customer
22 relations, and construction services. It is common knowledge that these specific
23 services must be provided in order for a utility to supply safe and reliable water

1 service. WSCK has demonstrated the reasonableness of its costs for these
2 services through my study in addition to the wealth of supporting data, such as
3 salaries and invoices, that have been filed in the record of this case.

4 Moreover, WSCK is provided with a substantial benefit with the ability to
5 draw upon those services without incurring an additional, marked-up expense.
6 My direct testimony clearly sets forth the substantial benefit WSCK customers
7 receive through the economies of scale for the professional services required to
8 provide safe and reliable water service.

9
10 **Q. DID THE COMMISSION SPECIFICALLY ADDRESS THE REASONABLENESS**
11 **OF THE SERVICES BEING PROVIDED IN THE ORDERS RENDERED FOR**
12 **THE FOUR (4) SYSTEMS INCLUDED IN YOUR COMPARABLE STUDY?**

13 **A.** No. Although the Commission's acceptance of rates including expenses
14 implicitly affirms the reasonableness of the costs for services in those cases, I
15 could find no comparable analysis or discussions within the filed documents that
16 addressed the salaries and wages of those water systems. Ms. Crane's
17 testimony suggests that WSCK be held to a different and more rigorous
18 regulatory standard by the Commission. Her recommendation of disallowance of
19 all allocated corporate charges, including costs for customer billing, collection
20 and customer service is not supported by sound rate making practices.

21

1 **Q. MR. SHAMBAUGH, IN YOUR OPINION DOES IT REALLY MATTER IF**
2 **OPERATING COSTS ARE DIRECTLY ASSIGNED TO EACH SYSTEM OR**
3 **ALLOCATED BASED UPON A REASONABLE APPROACH?**

4 **A.** No. In my opinion, the determination of the reasonableness of the charge for the
5 service rendered is the most important aspect in the review of any expense
6 claim. It is apparent that Ms. Crane is simply hiding behind the Commission's
7 decision in the Company's last case and has not performed any independent
8 analysis to support her position in this proceeding. Her contentions with respect
9 to the affiliate charges allocated to WSCK do not make those charges
10 unreasonable. In my opinion there is no basis for the Commission's adoption of
11 her disallowance of the corporate allocated costs.

12
13 **Q. MR. SHAMBAUGH, REFERING TO PAGE 26 OF MS. CRANE'S DIRECT**
14 **TESTIMONY, DO YOU HAVE ANY COMMENT REGARDING THE APPROVAL**
15 **OF AFFILIATE COSTS BY OTHER REGULATORY COMMISSIONS?**

16 **A.** Yes. The reference to the Pennsylvania case on lines 14 through 17 is a
17 description of a standard operating procedure by the Pennsylvania Public Utility
18 Commission. The approval of the affiliate agreement by the Commission is for
19 accounting purposes. What Ms. Crane fails to state in her testimony is that,
20 without a properly filed affiliate services agreement, a regulated Pennsylvania
21 utility would not be successful in claiming those costs in a general rate filing. The
22 prudence of the costs for rate making purposes is decided during the rate case.

23

1 **Q. MR. SHAMBAUGH, BASED UPON YOUR EXTENSIVE EXPERIENCE IN THE**
2 **WATER INDUSTRY, DO YOU BELIEVE THAT WSCK HAS DEMONSTRATED**
3 **THAT THE ALLOCATION OF AFFILIATE CORPORATE CHARGES ARE**
4 **FAIR, JUST, AND REASONABLE?**

5 **A.** Yes. In my opinion, should the Commission approve WSCK's requested
6 allocated affiliated costs, their customers will be paying the lower cost when
7 compared to the market for those services. The reasonableness of those
8 charges in comparison to other Kentucky regulated water systems has been
9 clearly demonstrated in my testimony and exhibits.

10

11 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY AT THIS TIME?**

12 **A.** Yes, it does.

AFFIDAVIT

The undersigned, Gary D. Shambaugh, being duly sworn, deposes and says that he is a Principal and Director of AUS Consultants and an Executive Vice President of AUS Consultants, Inc., and is authorized to submit this testimony on behalf of Water Service Corporation of Kentucky, and that the information contained in the testimony is true and accurate to the best of his knowledge, information and belief, after reasonable inquiry, and as to those matters that are based on information provided to him, he believes to be true and correct.

Gary D. Shambaugh
Gary D. Shambaugh, Affiant

NOTARY CERTIFICATE

STATE OF PENNSYLVANIA

COUNTY OF Cumberland

Subscribed, acknowledged and sworn to before me by Susan M. Macchia on
this 17 day of March, 2014.

My commission expires: Oct. 28, 2017.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Susan M. Macchia, Notary Public
East Pennsboro Twp., Cumberland County
My Commission Expires Oct. 28, 2017

Susan M. Macchia
NOTARY PUBLIC

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

Application of Water Service Corporation
of Kentucky for a General Adjustment
in Existing Rates

)

)

)

Case No. 2013-00237

REBUTTAL TESTIMONY OF PATRICK L. BARYENBRUCH

1 **REBUTTAL TESTIMONY**
2 **OF**
3 **PATRICK L. BARYENBRUCH**
4 **ON BEHALF OF**
5 **WATER SERVICE CORPORATION OF KENTUCKY**

6
7 **DOCKET NO. 2013-00237**

8 **Q. Please state your name and business address.**

9 A. Patrick L. Baryenbruch, 2832 Claremont Road, Raleigh, North Carolina 27608.

10 **Q. What is the purpose of your rebuttal testimony?**

11 A. I am responding to the direct testimony of Ms. Andrea C. Crane on behalf of the Office
12 of Attorney General. I will address the portion of her testimony that pertains to Project
13 Phoenix which appears on pages 32 to 35 of her testimony.

14 **Q. Ms. Crane claims you provide only “vague rationale” as to why Project Phoenix was
15 required. Would you explain your rationale in more detail?**

16 A. Although I respectfully disagree with the characterization that I provided “vague
17 rationale” in my testimony and responses to information requests, I am certainly willing
18 to provide additional details as to why Utilities Inc. (“UI”) needed to implement Project
19 Phoenix. UI’s financial and customer systems were obsolete and posed a significant risk
20 of failure, prolonged outages, security violations and loss of data. Their obsolescence is
21 evidenced by the following conditions:

- 22 (1) The customer care and billing system was over 10 years old, had been developed
23 in-house, used old “green screen” technology and was being run without vendor

1 support. It lacked functionality needed to provide responsive customer service.
2 The lack of vendor support means UI was unable to get help in resolving
3 complicated technical issues that the Information Technology (“IT”) organization
4 could not readily resolve. Consequently, in-house IT personnel had to
5 troubleshoot issues with no assurance of a timely resolution. Unresolved issues
6 could become critical if they held up important processing, delayed the monthly
7 close and the preparation of financial and regulatory reports. The lack of a
8 support arrangement also left UI dependent on a few employees with the
9 specialized expertise to maintain the customer system. If these employees left the
10 company it jeopardized the ability keep the customer system up and running.

11 (2) The financial system was also over 10 years old, used old “green screen”
12 technology and was being run without vendor support. This system only included
13 modules for accounts payable, cash management, capital projects and general
14 ledger. Other accounting functions (e.g., project accounting, fleet management,
15 procurement, asset accounting and reporting) were performed with Excel or
16 Access. Operating the financial system without vendor support offered the same
17 problems described above for the customer system.

18 (3) Important financial functions such as allocations and project accounting were run
19 on Excel and Access. These functions involve some of a utility’s most complex
20 accounting and data intensive processes. It is unthinkable that a utility of UI’s
21 size (over \$680 million in plant in service at December 31, 2006)¹ would depend
22 on tools that run on personal computers for critical information processing and
23 storage. Allocations and project accounting should absolutely be run on a well-

¹ UI Financial Statements 2005-2006

1 controlled system where such voluminous processing can be closely managed and
2 monitored and data backups made routinely.

3 (4) The entire IT infrastructure was fragmented. All UI locations were not network
4 connected, and access to the financial and customer systems was limited.

5 Systems were not interfaced with one another to allow data to be transferred
6 automatically. This situation created additional work because data from one
7 system (e.g., project accounting) had to be manually entered into another (e.g.,
8 general ledger).

9 (5) Financial, management and regulatory reports were prepared manually. This
10 process involved accountants compiling data from various sources and putting the
11 information into Excel spreadsheets. If late journal entries were made, the data
12 compilation process had to be repeated. This situation was inefficient and
13 susceptible to error.

14 In 2006, most utilities could prepare financial statements directly from
15 their financial system where all processing was completed before reports were
16 run.

17 (6) The old financial and customer systems did not include automated controls found
18 in newer systems which embed internal controls into the applications. Newer
19 systems provide for more effective segregation of duties and better controls over
20 access to applications, servers and data. For example, newer financial systems do
21 not allow the originator of a journal entry to be the same person who approves
22 that journal entry before it is recorded. Around the time Project Phoenix was
23 being considered, the Sarbanes-Oxley Act (SOX) had become effective and

1 obligated UI management to be attentive to IT-related internal controls.
2 Maintaining an up-to-date IT infrastructure is a critical factor in ensuring SOX
3 compliance. All of this weighed in favor of the decision to replace the old
4 financial and customer systems.

5 (7) The old financial and customer systems did not have up-to-date security
6 capabilities to protect them from external threats. Furthermore, their lack of
7 vendor support that includes regular security updates left UI vulnerable to hackers
8 and cybercriminals looking to exploit IT weaknesses.

9 **Q. Is it understandable that Ms. Crane can only see a “vague rationale” for Project**
10 **Phoenix?**

11 A. It may be that Ms. Crane did not comprehend the implications of the antiquated condition
12 of UI’s old systems described in my direct testimony. Ms. Crane has no apparent IT
13 expertise. Her direct testimony mentions no experience with the evaluation, selection or
14 implementation of IT projects. The list of previous consulting clients in Appendix A of
15 her testimony includes no IT-related assignments. On The Columbia Group’s website,
16 Ms. Crane’s background description makes no mention of her IT expertise. Prior to
17 working for The Columbia Group, Ms. Crane held positions related to economic policy,
18 product management, treasury and regulation, none of which are IT-related. Perhaps her
19 lack of experience in the field made it difficult to understand the need for Project
20 Phoenix.

21 **Q. Is it common for utility companies to periodically replace or upgrade their**
22 **information systems?**

1 A. Yes. IT systems, like any asset, have a limited life before they become obsolete due to
2 changing requirements and technology. For instance, up to the 1990s, utilities primarily
3 ran applications on large mainframe computers. At that time, it became feasible to run
4 major systems on servers which provide greater processing flexibility, automation and
5 reliability. Changes like this make it necessary to periodically replace or upgrade IT
6 systems.

7 Two of my current utility company clients with operations in Kentucky recently
8 completed or are in the process of implementing major IT system projects similar in
9 nature to Project Phoenix. American Water, parent to Kentucky-American Water,
10 recently completed a transition to the software application SAP. Previously, American
11 Water ran a financial system from JD Edwards.

12 NiSource, Inc., is another client in the midst of a major IT project to transition to
13 PeopleSoft Financials. NiSource, Inc., is the parent of Columbia Gas of Kentucky.

14 I mention this as evidence that a large project such as Project Phoenix is part of
15 the normal course of business in which IT assets have to be kept current to fully support
16 the delivery of service to utility customers.

17 **Q. Is there independent corroboration of the obsolescence of UI's technology?**

18 A. Yes. In 2007, the management consulting firm of Schumaker & Company, Inc.,
19 (Schumaker) performed a commission-ordered audit of UI's South Carolina utilities. Its
20 audit report dated April 2, 2007, described UI's customer and financial systems as
21 follows:

22 ***Billing System***

1 *The billing system is an older character-based system that has been used within WSC*
2 *for many years (predating many of the current staff). It is more or less a custom*
3 *application that was written for WSC many years ago – perhaps 20 years ago.*

4 ***Accounting System***

5 *The accounting system is of a similar age as the billing system. The accounting*
6 *system is only used for maintaining the accounting records with little additional*
7 *capability such as forecasting and budgeting, inventory control, purchasing and*
8 *materials management, etc. and other items that are characteristics of today’s*
9 *enterprise resource planning (ERP) systems.*

10 *In the case of both the billing system and the accounting system, the underlying*
11 *technologies are so old that it is difficult to get outside support for these systems at*
12 *this time. However, some WSC personnel are capable of supporting these older*
13 *systems.*²

14 The Schumaker continues with the related finding:

15 ***Finding IV-8 WSC’s information systems are outdated and in need of significant***
16 ***upgrade.***

17 *As discussed above, the current billing and accounting systems are older technologies*
18 *that do not provide the features available in current commercially off-the-shelf*
19 *(COTS) software packages. In addition, ongoing support of these older systems is*
20 *questionable, at best. The current billing and accounting systems are in the process*
21 *of being replaced with a COTS packages. WSC has engaged Deloitte & Touche to*

² Final Report on the Management Review Audit of Utilities, Inc. with Specific Focus on the Five Subsidiary Water and Wastewater Companies That Operate in South Carolina (April 2, 2007) (page 88)). A copy of this report is being filed contemporaneously herewith.

1 *guide WSC through this review, selection, and implementation process. WSC*
2 *anticipates a two-year implementation process.*³

3 **Q. Did Schumaker recommend any IT-related improvements in this 2007 audit report?**

4 A. Yes, the firm recommended the development of an IT plan covering the information
5 listed below. At the time of Schumaker’s final report (April 2007), Project Phoenix was
6 still underway (the financial system went live in December 2007 and the customer care
7 and billing system went live in June 2008). This type of documentation was developed as
8 part of the Project Phoenix initiative.

- 9 • *Information Technology Department Organization and Management – Overall*
10 *presentation of the management and organization of information technology*
11 *activities, which would include organization structure, staffing levels and skills,*
12 *IT business processes, and management systems.*
- 13 • *Information Technology Systems – Description of current and project future*
14 *information technology systems in place, which would include enterprise*
15 *resources planning (ERP) systems, fleet management systems, materials*
16 *management systems, GIS systems, document imaging and processing systems,*
17 *workflow systems, email systems, internet, website and access, mobile*
18 *technologies, and any other systems that are anticipated to be used in WSC’s day-*
19 *to-day business. It would also include a review of the software acquisition and/or*
20 *development processes and ongoing support provided within the organization.*
- 21 • *Network Infrastructure – Description of current and future hardware and*
22 *software, including speed, capacity, and potential for future growth including:*

³ Final Report on the Management Review Audit of Utilities, Inc. with Specific Focus on the Five Subsidiary Water and Wastewater Companies That Operate in South Carolina (April 2, 2007) (page 89).

- 1 *a. Physical network diagram*
- 2 *b. Servers – configuration, age, performance, software configurations*
- 3 *c. Workstations – configuration, age, performance, software configurations*
- 4 *d. Routers*
- 5 *e. Printers*
- 6 *f. Cabling*
- 7 *g. Security*
- 8 *h. Capacity and speed*
- 9 *i. Telephone and cellular services*
- 10 *j. Voicemail/unified messaging*
- 11 *k. Mobile services*
- 12 *l. Multimedia services*
- 13 • *Systems Security and Reliability – A review and assessment of physical security,*
- 14 *logical security, fault tolerance, disaster recovery, and computer room layout,*
- 15 *including:*
 - 16 – *Physical security arrangement*
 - 17 – *Network security (security configurations), including Active Directory,*
 - 18 *organizational units, virus scanning, spam control, and spyware*
 - 19 *mitigation technologies*
 - 20 – *Firewalls*
 - 21 – *Fault tolerance*
 - 22 – *Backup processes*
 - 23 – *Disaster recovery*

1 – *Systems Security and Reliability – A review and assessment of physical*
2 *security, logical security, fault tolerance, disaster recovery, and computer*
3 *room layout, including:*

- 4 • *User Support – Plans for hardware/software maintenance and repair, help desk*
5 *functions, patch updates, software upgrades, and other ongoing activities need to*
6 *be reviewed.*⁴

7 **Q. Was Schumaker critical of Project Phoenix in its 2007 audit report?**

8 A. No. Nowhere in the firm’s 2007 audit report is the need for Project Phoenix questioned.
9 The scope of Project Phoenix is not criticized. Finally, there is no criticism of Project
10 Phoenix’s cost. If Schumaker had found anything wrong with Project Phoenix or its
11 resultant technology improvements, the firm would have been obligated to say something
12 in its report.

13 **Q. Did Schumaker mention Project Phoenix in connection with any other management**
14 **audits of UI operating companies?**

15 A. Yes, in its April 2012 report covering the management audit of UI’s Twin Lakes Utilities,
16 Inc., for the Indiana Utility Regulatory Commission, Schumaker & Company once again
17 cites the problems with UI’s technology back in 2006 as the basis for Project Phoenix:

18 *Project Phoenix was the name of a prior UI initiative to evaluate the state of its*
19 *processes and systems. The company had not made a significant investment in*
20 *technology in quite some time. Antiquated systems, lack of integration, and the lack of*
21 *standardization were beginning to have an adverse effect on the company and its*
22 *customers. Accordingly, UI set out to improve its capabilities and processes in the*

⁴ Final Report on the Management Review Audit of Utilities, Inc. with Specific Focus on the Five Subsidiary Water and Wastewater Companies That Operate in South Carolina (April 2, 2007) (pages 90-91).

1 *accounting, customer service, customer billing, and financial and regulatory*
2 *reporting areas.*

3 *Project Phoenix began in early 2006 with a series of internal and external*
4 *evaluations, which culminated in a business case presentation by Deloitte to the*
5 *company in September 2006. The business case identified: Drivers for Change,*
6 *Current State Overview, Recommended Solutions, Future State, and Benefits to*
7 *Stakeholders. The business case presentation confirmed UI's initial evaluations that*
8 *fragmented and non-standardized processes were complex and inefficient, with an*
9 *attendant risk of error and control breakdown, which indicated that the infrastructure*
10 *unnecessarily placed stress on the company's human capital resources. The*
11 *company's legacy accounting and customer care systems were either fully customized*
12 *or unsupported, or both, which resulted in a risk of breakdown and impeded*
13 *management's ability to obtain information to make decisions, and use of*
14 *spreadsheets made ensuring accuracy and control difficult, resulting in the potential*
15 *for errors in operation and regulatory reports. After the business case presentation*
16 *and an evaluation of potential solutions, UI management selected JD Edwards*
17 *Enterprise One (JDE) as the financial system, including asset management, and*
18 *Oracle's Customer Care and Billing System (CC&B) as the customer information*
19 *system. UI management believes that these systems are integrated in a manner that*
20 *allows for the sharing of crucial information between the company's different*
21 *operational organizations.*⁵

⁵ Management and Operations Audit Of Twin Lakes Utilities, Final Report (August 2012) (page 70).

1 Schumaker’s description of Project Phoenix provides a strong unbiased endorsement of
2 the project.

3 **Q. Does Schumaker mention in its 2012 audit report that improvements brought about**
4 **by Project Phoenix were worthwhile?**

5 A. In my opinion, yes. Schumaker & Company’s 2012 audit report for UI’s Twin Lakes
6 Utilities says the following about the improved condition of UI’s IT infrastructure:

7 *Technology and systems have improved significantly since we last reviewed these*
8 *activities in 2007 for the South Carolina Office of Regulatory Staff (ORS). At that*
9 *time, WSC was just beginning to network computers and there were no field*
10 *deployment of technology, such as Panasonic Toughbooks subsequently provided to*
11 *Field Technicians for accessing CC&B functions. The mix of computer technology*
12 *included both Windows and Apple technology, now WSC has standardized on*
13 *Windows computers. Application systems in place were home-grown applications*
14 *that had minimal capability to efficiently and effectively perform necessary tasks.*⁶

15 **Q. In this 2012 audit report, did Schumaker criticize the technology improvements**
16 **brought about by Project Phoenix?**

17 A. No. Schumaker’s description of Project Phoenix and its finding that “Technology and
18 systems have improved significantly since we last reviewed these activities in 2007”
19 provides an unqualified endorsement. As with its 2007 audit report, the firm’s 2012 audit
20 report does not question the need for Project Phoenix. Neither the scope nor the cost of
21 Project Phoenix is criticized. Here too, if Schumaker had found anything wrong with
22 Project Phoenix or its resultant technology improvements, the firm would have been
23 obligated to say something in its report.

⁶ Management and Operations Audit Of Twin Lakes Utilities, Final Report (August 2012) (page 43)

1 **Q. Does Schumaker have the IT experience to make an informed judgment on Project**
2 **Phoenix?**

3 A. Yes. Schumaker is a respected management and IT consulting firm that has performed
4 many commission-ordered audits of regulated utilities. Concerning its IT services,
5 Schumaker’s website indicates: “We combine technical knowledge with an
6 understanding of business procedures to make ‘big picture,’ real-life assessments”. The
7 firm’s website provides a long list of its previous IT-related client assignments. A
8 screenshot of this page from Schumaker’s website is shown in Appendix A.

9 **Q. Has the Kentucky Public Service Commission ever retained Schumaker in the past?**

10 A. Yes. My query of “Schumaker & Company” on the Kentucky Public Service
11 Commission’s website showed the firm was selected to perform commission-ordered
12 audits of the following utilities in Kentucky:

- 13 (1) The Union Light, Heat and Power Company – management audit (1989)
- 14 (2) Kentucky-American Water Company – management audit (1990)
- 15 (4) Western Kentucky Gas Company – management audit (1989)
- 16 (5) American Electric/Hazard Service Area – focused management audit (2003)
- 17 (6) Kentucky Power – management audit (2003)

18 **Q. In the sentence starting on line 17 of page 33, Ms. Crane indicates your testimony**
19 **contains no cost-benefit analysis in support of the decision to implement Project**
20 **Phoenix. What are the costs and benefits of Project?**

21 A. UI had two options in 2006 when Project Phoenix was being considered: Either continue
22 using the old systems or replace them. We know the cost of replacement turned out to be
23 \$21,122,468.

1 The benefits associated with this expenditure are both economic and non-
2 economic. In my opinion, the principal economic benefit from Project Phoenix is the
3 elimination of the many risks I described earlier in this rebuttal testimony. Project
4 Phoenix established stable systems and processes, thus eliminating potential costs
5 associated with catastrophic disruptions to UI's business posed by the old systems. To
6 quantify the economic benefit from the new technology, I first assigned a probability of
7 catastrophic failure to the old systems. Based on their condition, I would estimate that to
8 be 1%. If I apply this probability to the total value of UI as represented by its
9 shareholder's equity at December 31, 2006, \$120.8 million, I arrive at an estimated cost
10 avoidance of between \$1.2 million. That represents an on-going pre-tax return on
11 investment of 5.7% (\$1.2 million / \$21.1 million). The associated avoided costs could
12 arise from any number of situations. UI might not have been able to produce financial
13 statements on which its outside auditor could render an opinion, thus putting UI in default
14 of debt covenants and ultimately raising its cost of capital. Another possible scenario
15 with the old systems is the complete loss of the customer system's data, thereby making it
16 impossible for the company to prepare customer bills for some period of time. The loss
17 to UI of one month's water and waste water revenue in 2006 would have amounted to \$8
18 million (\$97 million / 12 months). Another possible scenario is UI's inability to produce
19 timely reports for regulators, thus making the company subject to fines and sanctions. In
20 the event any of these or other disastrous scenarios occurred, UI would have been
21 obligated to launch a recovery initiative to bring the old systems back up, recreate data
22 and stabilize the processing of information. This would have been a disruptive and costly

1 effort involving outside experts. The improvements provided by Project Phoenix allowed
2 UI to avoid these disastrous and costly disruptions.

3 The estimated potential 1% loss in shareholder's equity seems possible when you
4 look at the IT-related problems experienced by other companies. In the days before
5 Thanksgiving, 2013, Target Corporation suffered a major data breach by hackers. In the
6 weeks that followed, Target's share price dropped from \$66 to below \$56 in early
7 February. Its current price is around \$60 per share, which is a 9% reduction from the \$66
8 November pre-breach price.

9 Besides the predominant benefit of avoiding risk of catastrophic failure, UI
10 identified the following specific benefits from Project Phoenix that likely produced cost
11 savings:

- 12 (1) Elimination of maintenance work where customer service reps unknowingly
13 request service on property not owned by UI companies
- 14 (2) Elimination of redundant reviews of vendor invoices associated with the old
15 process
- 16 (3) Reduction of vehicle fleet and gas costs by use of the new system's fleet
17 management capabilities
- 18 (4) Reduction in the manual time to process customer checks in local offices through
19 scanning technology
- 20 (5) Elimination of printing and mailing expenses associated with reports printed in
21 the Northbrook corporate office and sent to local offices
- 22 (6) Increased meter reader efficiency because meter routes can be automatically
23 rebalanced

1 (7) Reduced meter re-reads through the use of business rules that can be incorporated
2 into the new systems⁷

3 The company was unable to find historical documentation showing the calculation of
4 savings from these improvements. At this point in time, it is difficult for me to quantify
5 their cost savings. However, the new financial and customer systems have the
6 capabilities to implement these and other cost savings improvements.

7 Besides its cost savings and avoidance, Project Phoenix produced important
8 qualitative benefits. Among the more important are the following:

9 (1) The new customer system provide customers with improved call handling,
10 increased access to usage, billings, payments and service orders, reduction in
11 service order errors, invoices that are easier to read and interpret invoices and
12 more consistent billing cycles. The company's response to Item 20 of the
13 Commission Staff's Second Request for Information provides a detailed
14 description of these improvements.

15 (2) Information necessary for the management of UI's utility business is more
16 accessible and available when needed.

17 (3) Reports for internal and external use are more accurate, timely and more
18 efficiently produced.

19 **Q. Do you believe these benefits justified Project Phoenix?**

20 A. Yes. Critical utility IT systems are fundamentally important to a utility's ability to
21 provide service to customers. When they become obsolete, the systems need to be
22 replaced.

⁷ Utilities Inc. Financial Operations Assessment, August 3, 2006 (pages 13-14), attached as a confidential exhibit in WSCK's response to Item 34 for the Attorney General's Initial Request for Information.

1 Between the economic benefits I quantified above and the many non-quantifiable
2 benefits, it was appropriate for UI to implement the technology improvements associated
3 with Project Phoenix.

4 **Q. Once the decision was made to undertake Project Phoenix, did UI properly consider**
5 **the costs of technology alternatives?**

6 A. Yes. Once the replacement decision was made, UI conducted formal and comprehensive
7 vendor evaluations, issued requests for proposal and undertook a selection process that
8 considered cost and system capabilities. This is evidenced by Project Phoenix September
9 26, 2006, vendor evaluation presentation⁸, a 50-page assessment of potential vendors for
10 financial, customer and reporting systems. I am impressed with the quality and
11 thoroughness of this analysis. The analysis was ultimately used to select vendors for the
12 financial and customer systems.

13 Cost reasonableness was also ensured by other practices applied during Project
14 Phoenix's implementation. The project management methodology of Deloitte
15 Consulting, the project's implementation partner, was utilized to plan and manage project
16 activities. Also, the project was overseen by a steering committee comprised of UI
17 executives and the senior project management team. The steering committee monitored
18 progress, reviewed issues and approved decisions that needed to be made during the
19 project's execution.

20 **Q. Do you agree with how Ms. Crane characterizes your work in the paragraph that**
21 **starts on line 5, page 34, of Ms. Crane's testimony?**

⁸ Financial, Customer Information System and Business Intelligence Vendor Evaluation (September 26, 2006), attached as a confidential exhibit in WSCK's response to Item 34 for the Attorney General's Initial Request for Information.

1 A. No. This paragraph contains a mischaracterization that needs to be corrected. In the
2 sentence that starts on line 10 of page 34, Ms. Crane attempts to portray my review of
3 Project Phoenix as cursory: “Moreover, this review was based primarily on discussions
4 with Mr. Lubertozi, UI’s Chief Regulatory Office and on Mr. Baryenbruch’s
5 professional experience.” This is not true. My evaluation was based primarily on a
6 review of Project Phoenix-related documents. I disclosed this fact in two data requests.

7 In response to Item 19(b) of the Commission Staff’s Second Request for
8 Information, I responded that to answer the four questions that comprised my scope of
9 work I “reviewed data including the project’s scope of work, business case, IT
10 architecture, vendor evaluation, scoping and planning documentation, kickoff
11 presentation, change requests and project steering committee status reports.”

12 I also provided the 45 documents I reviewed in response to Item 35(f) of the
13 Attorney General’s Initial Request for Information. These documents contain a more
14 than 600 pages of detailed information on all aspects of Project Phoenix, including its
15 justification, planning and implementation.

16 My extensive documentation review allowed me to conclude the improvements
17 associated with Project Phoenix were necessary.

18 **Q. On page 34, Ms. Crane states that no comparisons have been made of Project
19 Phoenix’s costs to external benchmarks. Is that true?**

20 A. No. In response to Item 21 of the Commission Staff’s Second Request for Information, I
21 compared the per customer cost of Project Phoenix’s customer system to the cost of
22 customer systems recently implemented by two Kentucky utilities, Louisville Gas and
23 Electric/Kentucky Utilities and Louisville Water Company. According to Item 21 of the

1 Commission Staff's Second Request for Information, the cost of Louisville Gas and
2 Electric/Kentucky Utilities' new customer system was \$68 per customer. According to
3 the Kentucky Public Service Commission's order in Kentucky American Water Company
4 recent rate case (2012-00520), the cost of Louisville Water Company's new customer
5 system was \$92 per customer. Project Phoenix's customer system cost around \$27 per
6 customer (\$7,127,000 / 265,278 customers). This is just 40% of Louisville Gas and
7 Electric/Kentucky Utilities' cost per customer and 29% of Louisville Water Company's
8 cost per customer.

9 In Appendix B to this rebuttal testimony, I also compare the per customer cost for
10 the customer systems of Project Phoenix (around \$27) and American Water's Business
11 Transformation Program (BT) (around \$30 according to information filed in Kentucky-
12 American Water Company's most recent rate case⁹). The comparison is not absolutely
13 precise because American Water implemented SAP which is a software package regarded
14 as a very comprehensive solution that likely has more functionality than UI's customer
15 system, while UI had to start with less of a technological foundation for its customer
16 software system when Project Phoenix was being developed. The two amounts are in
17 reasonable proximity of one another.

18 These comparisons shows Project Phoenix costs are in line with the cost of other
19 utilities' major IT projects.

20 **Q. On page 35 of her direct testimony, Ms. Crane recommends the complete**
21 **disallowance of Project Phoenix-related depreciation expense. Do you agree with**
22 **her recommendation?**

⁹ Direct testimony of Gary M. Verdouw, (December 28, 2012) Case No. 2012-0520

1 A. No, I disagree with her recommendation. In my opinion, the improvements associated
2 with Project Phoenix were necessary because UI's old financial and customer systems
3 were obsolete and consequently posed great operational and financial risks. My opinion
4 is corroborated by Schumaker & Company who noted in 2007 that UI's financial and
5 customer systems were built on old technology that is difficult to maintain. Schumaker, a
6 firm that has audited several utilities regulated by the Kentucky Commission, later found
7 in 2012 that UI's "Technology and systems have improved significantly since we last
8 reviewed these activities in 2007" In my view, Schumaker's change of opinion is an
9 unqualified endorsement for the improvements brought about by Project Phoenix.

10 Project Phoenix's costs are justified by the quantitative and qualitative benefits it
11 produced. The poor condition of UI's old financial and customer systems left it
12 vulnerable to risk of failure and a high cost to recover the old systems.

13 I believe the project's costs were reasonable based a per-customer cost
14 comparison that showed Project Phoenix's customer system cost considerably less than
15 those of Louisville Gas and Electric/Kentucky Utilities and Louisville Water Company
16 and in line with Kentucky-American's cost per customer.

17 Based on my review of the status reports from 2006 to 2008, I believe the project
18 was properly managed. A steering committee, consisting of senior UI managers and the
19 project management team, provided an effective oversight mechanism to ensure issues
20 were addressed and decisions made on a timely basis.

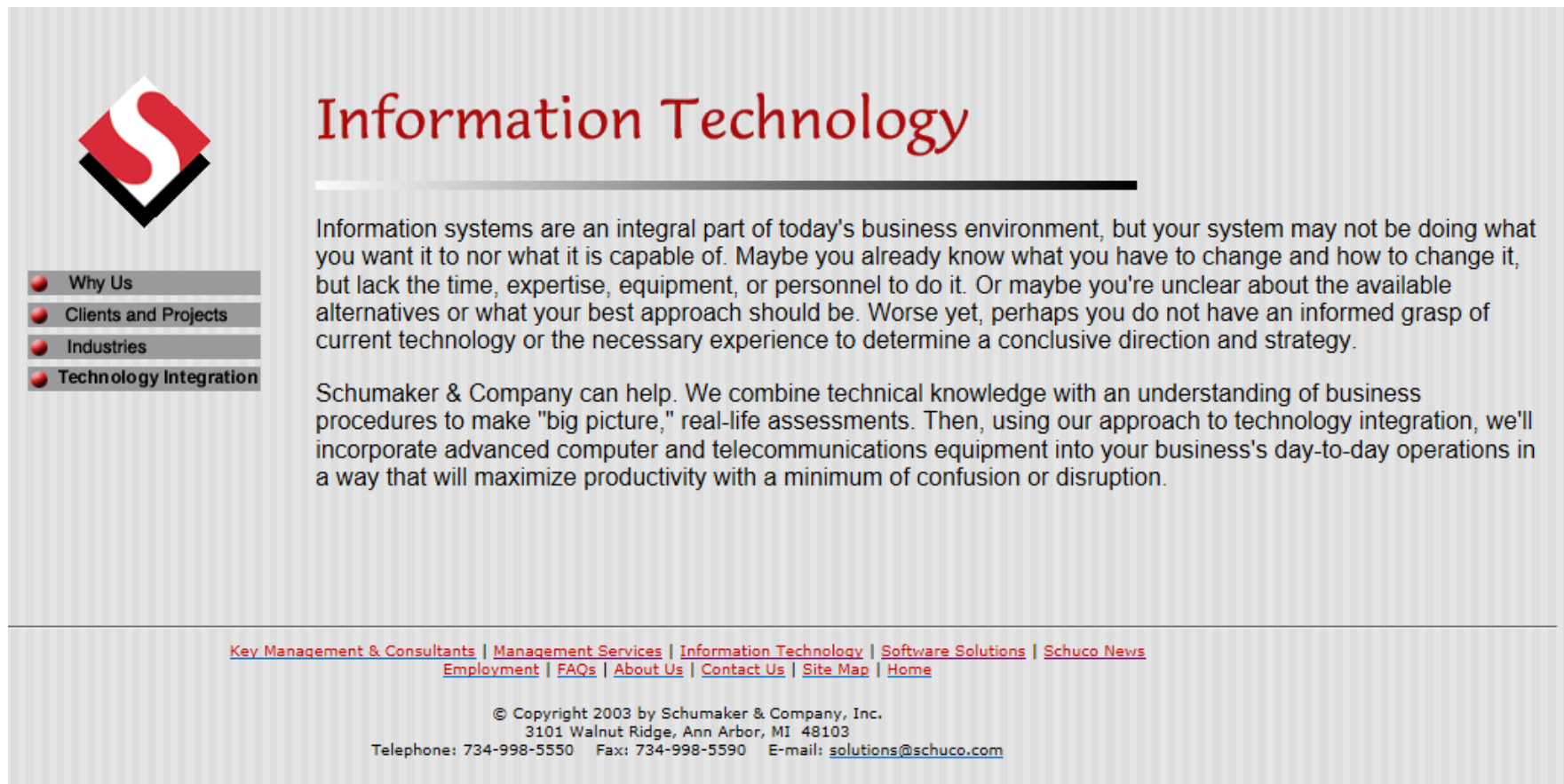
21 For these reasons, I believe WSCK should be allowed to recover depreciation
22 expense associated with Project Phoenix.


23 **Q. Does this complete your rebuttal testimony?**

1 A. Yes.

Rebuttal Testimony of Patrick L. Baryenbruch

Appendix A – Screenshot of Schumaker & Company’s Website





- Why Us
- Clients and Projects
- Industries
- Technology Integration**

Information Technology

Information systems are an integral part of today's business environment, but your system may not be doing what you want it to nor what it is capable of. Maybe you already know what you have to change and how to change it, but lack the time, expertise, equipment, or personnel to do it. Or maybe you're unclear about the available alternatives or what your best approach should be. Worse yet, perhaps you do not have an informed grasp of current technology or the necessary experience to determine a conclusive direction and strategy.

Schumaker & Company can help. We combine technical knowledge with an understanding of business procedures to make "big picture," real-life assessments. Then, using our approach to technology integration, we'll incorporate advanced computer and telecommunications equipment into your business's day-to-day operations in a way that will maximize productivity with a minimum of confusion or disruption.

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<http://www.schuco.com/IT/IT.htm>

Rebuttal Testimony of Patrick L. Baryenbruch

Appendix B – Comparison of customer systems costs for Kentucky-American Water Company’s BT Program and WSCK’s Project Phoenix

source: Direct testimony of Gary VerDouw in Case 2012-00520, Appendix BT-1 and Patrick Baryenbruch calculations					
	Total	KAWC	Number of	KAWC	Customer
Business Transformation Component	Cost	Allocation	KAWC	Cost Per	System
			Customers	Customer	Comparison
Customer Information System	\$ 95,763,324	\$ 3,671,429	124,000	\$ 29.61	\$ 29.61
source: UI information and Patrick Baryenbruch calculations					
	Total	WSCK	Number of	WSCK	
Projec Phoenix	Cost	Allocation (A)	WSCK	Cost Per	
			Customers	Customer	
Customer System	\$ 7,126,679	\$ 192,684	7,300	\$ 26.40	\$ 26.40
<u>Note A</u>					
WSCK Customers	7,300				
Total Customers	270,000				
% WSCK	2.70%				

AFFIDAVIT

The undersigned, Patrick L. Baryenbruch, being duly sworn, deposes and says that he is the President of Baryenbruch & Company, LLC, and is authorized to submit this testimony on behalf of Water Service Corporation of Kentucky, and that the information contained in the testimony is true and accurate to the best of his knowledge, information and belief, after reasonable inquiry, and as to those matters that are based on information provided to him, he believes to be true and correct.

Patrick L. Baryenbruch
Patrick L. Baryenbruch, Affiant

NOTARY CERTIFICATE

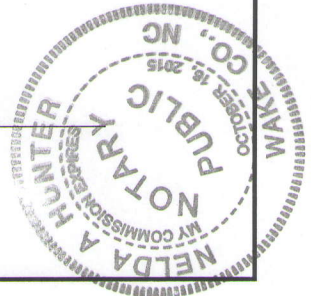
STATE OF NOUTH CAROLINA

COUNTY OF Wake

Subscribed, acknowledged and sworn to before me by Patrick L. Baryenbruch on
this 19th day of March, 2014.

My commission expires: 10-16-2015

Nelda A Hunter
NOTARY PUBLIC



C. DUKES SCOTT
EXECUTIVE DIRECTOR

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May 7, 2007

FLORENCE P. BELSER
GENERAL COUNSEL

VIA EFILING AND HAND DELIVERY

Mr. Charles L.A. Terreni
Chief Clerk/Administrator
South Carolina Public Service Commission
101 Executive Center Dr., Suite 100
Columbia, SC 29210

RE: Docket Nos. 2004-357-W/S; 2006-107-W/S; 2006-92-W/S; and 2006-97-W/S
Order No. 2006-284

Dear Mr. Terreni:

Enclosed please find a copy of the final audit report published by Schumaker & Company. The final report of the management audit of Utilities, Inc. includes its five subsidiary water and wastewater companies operating in South Carolina which are as follows:

1. Carolina Water Service, Inc.
2. Tega Cay Water Service, Inc.
3. Utilities Services of South Carolina, Inc.
4. Southland Utilities, Inc.
5. United Utility Companies, Inc.

Pursuant to Commission Order 2006-284, ORS is filing the final audit report with the Commission and providing a copy to all parties of record in the above-referenced dockets.

Sincerely,

Nanette S. Edwards

cc: Parties of record
Enclosure

Schumaker & Company



**Final Report
on the
Management Review Audit of Utilities, Inc.
with Specific Focus on the Five Subsidiary
Water and Wastewater Companies
That Operate in South Carolina**

- ◆ Carolina Water Service, Inc. (CWS)
- ◆ Tega Cay Water Service, Inc. (TCWS)
- ◆ Utilities Services of South Carolina, Inc. (USSC)
- ◆ Southland Utilities, Inc. (SU)
- ◆ United Utility Companies, Inc.(UUC)

April 2, 2007

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I. Executive Summary

The South Carolina Office of Regulatory Staff (ORS) identified the need to have a consultant conduct a management review audit of Water Services Corporation (WSC) with specific focus on the operations of the five subsidiary water and wastewater companies that operate in South Carolina, those being:

- ◆ Carolina Water Service, Inc. (CWS)
- ◆ Tega Cay Water Service, Inc. (TCWS)
- ◆ Utilities Services of South Carolina, Inc. (USSC)
- ◆ Southland Utilities, Inc. (SU)
- ◆ United Utility Companies, Inc.(UUC)

Today, new challenges are making water operations a dynamic and rapidly changing environment, requiring increased interaction between the functional areas, new technologies, expanded capabilities from staff personnel, and for some utilities, re-evaluation of utility philosophies. Utilities have had to increase staff and obtain new technical skills. New regulations, such as those pertaining to the disposal of sludge and the protection of aquatic wildlife, have also had important implications on water utility operations. In addition, many utilities have had to deal with the possibility that their current raw water sources may be inadequate over the long-term. Demand management, conservation, and other non-conventional solutions have become important elements in long-term planning. The implications on water rates have resulted in greater interaction between the engineering design, finance and rates, and customer relations departments of many utilities throughout the long-term planning process.

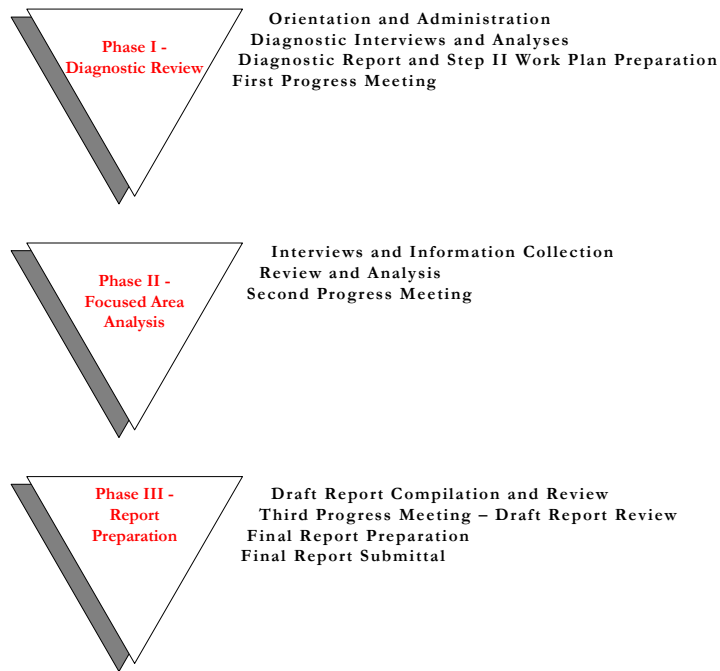
The bottom line of this project was to determine whether there are efficiency measures that could be passed on to South Carolina ratepayers in the form of lower rates through the implementation of greater efficiencies in organizations, operations, or both. Additionally, included in the project was the determination of whether the ratepayers of South Carolina are being properly and economically served by the range of corporate services that are provided to the WSC operations in South Carolina by the management and staff located in West Columbia (South Carolina), Charlotte (North Carolina), and Northbrook (Illinois).



A. Scope of Work

Synopsis of Study

We conducted this management review audit based on a three-phase review process, which was custom tailored to meet the objectives of ORS. These three phases, and their components, are schematically summarized at right. This process provided Schumaker & Company consultants with a structured approach that is comprehensive and logical, as well as interactive and participative with ORS and WSC. This process was originally designed to establish and sustain vital, interactive working relationships between the subject regulatory agency, the utility, and the Schumaker & Company project team during the course of management and operations audits. We have refined this three-phase process over many reviews, audits, and studies conducted with the same team members proposed for this project.



The following text presents a concise summary the results of our investigations into the work tasks that were specified in the request for proposal (RFP) from ORS.

Specific Work Tasks

The specific work tasks included in the scope of work, along with a short description, are listed as follows:

Basic Corporate Decision-Making

1. *Analytical Discipline*: Review the reports and studies relied upon by the Board of Directors and top management in reaching major policy and investment decisions, especially the extent to which indirect as well as direct costs and benefits are determined and financial risks are formally weighed.

2. *Planning Concepts and Practices:* Review the extent to which regulatory changes are evaluated and responded to. Review how these changes impact operational and budgetary decision-making.
3. *Organizational Design:* Review the extent to which the roles and authorities of and relationships among the Board of Directors and management staff of Water Services Corporation and its affiliate companies have been defined. Review any overlap or inconsistency of duties and responsibilities between corporate staff and the staff of the subsidiary companies. Review relationship between subsidiaries and other affiliate companies of Water Services Corporation. Consider benefits of consolidation or merger of affiliated companies.

Major Operational Activities

4. *Service Levels:* Review whether goals applicable to both system reliability and responsiveness to individual business and residential customers have been set and met. Review contingency plans to ensure system reliability.
5. *Revenue/Cost Allocation:* Review the cost allocation plan for corporate overhead, both direct and indirect costs, to the subsidiary companies.
6. *Pricing Strategies:* Review the use of zonal rates for systems that interconnect with other government-owned systems or systems established pursuant to Section 33-36-10 of the SC Code of Laws versus statewide rates for systems where the company operates its own water supply or wastewater treatment facilities.

Staff Functions

7. *Human Resource Policies and Practices:* Review the extent to which managerial performance is vigorously assessed and corrective action is taken where warranted. Review adequacy and implementation of compensation plans and how they relate to industry standards. Review turnover rate per profession in comparison with industry standards. Describe any anomalies that may be found.
8. *Pending Litigation:* Review any pending litigation from affiliated South Carolina companies that may impact Water Services Corporation. Contractor will agree and covenant not to disclose in its audit any confidential information related to pending litigation and will agree to use information it learns about pending litigation for no other purposes than for this.
9. *Technology Tools and Training:* Review the company's use of technology to further its business objectives. Review training policies and practices to determine whether adequate training is provided to all employees.

We have organized our findings and recommendations to be consistent with the specific work tasks identified in the RFP.



B. Overall Summary

By its very nature, a management review audit is a critical assessment of the management and operations of an organization. This management review audit was performed for ultimate benefit of the ratepayers of Utilities, Inc. (UI) subsidiaries in South Carolina. The overall objective of the UI subsidiaries is, simply, the safe, reliable long-term provision of water and wastewater services at just and reasonable costs. Continued success in achieving this objective is directly related to the management efforts and effectiveness of UI subsidiaries. Schumaker & Company's role was to determine how this objective is being met and to identify improvements that the UI subsidiaries can make to enhance the attainment of this objective. In the interest of efficiency, our review focuses on areas that could be improved and not on areas we found optimum or exceptional performance. ***The lack of various "pats on the back" for good performance should not be construed negatively in anyway.***

Because the bulk of any management review audit is devoted to opportunities for improvement, this report may give the reader the impression that Utilities, Inc. is seriously deficient. This is not the case. Utilities, Inc. has done a good job of providing water and wastewater services to its customers. Water Service Corporation employees are dedicated and take pride in their responsibilities for providing water and wastewater services in South Carolina.

C. Listing of Findings

This section presents a list of findings with the corresponding page of this report where the finding is discussed.

I. EXECUTIVE SUMMARY 1

II. BASIC CORPORATE DECISION-MAKING..... 11

Finding II-1 The Board of Director’s involvement in the oversight of Utilities, Inc. (UI) operations has varied with UI’s ownership. 11

Finding II-2 It was not possible to determine the role that the Board of Directors will play in the oversight of WSC utility companies..... 13

Finding II-3 The Operating Committee (not a Board committee but a management committee) is the primary oversight group for utility operations. 13

Finding II-4 The Utilities, Inc. strategic planning process is inadequate..... 15

Finding II-5 Corporate planning and budgeting processes are evolving but could be improved..... 15

Finding II-6 WSC corporate planning processes are not being adequately supported by its current information (computer) systems..... 21

Finding II-7 The tracking of the adherence to corporate plans could be improved with the implementation of better information (computer) systems. 21

Finding II-8 The regional organization adopted by Utilities, Inc. is similar to other water companies.... 23

Finding II-9 Staffing levels in South Carolina have increased over the last five years in response to regulatory requirements. 26

Finding II-10 The relationships of UI affiliates are not appropriately documented..... 37

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Finding IV-10 There is insufficient emphasis on training and certification within the IT Department.....91

Finding IV-11 Several of WSC’s current applications may need to be rewritten with the migration to a Windows 2003 network.....92



D. Listing of Recommendations

This section presents a list of recommendations with the corresponding page of this report where the finding is discussed.

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Recommendation II-1 Require the Operating Committee to maintain meeting minutes and appropriate documentation to show how major policy and investment decisions are made. (Refer to Finding II-1, Finding II-2, and Finding II-3)	14
Recommendation II-2 Implement a formal strategic planning process. (Refer to Finding II-4)	22
Recommendation II-3 Continue to improve corporate planning and budgeting processes. (Refer to Finding II-5, Finding II-6, and Finding II-7)	22
Recommendation II-4 Develop formal contractual agreements for all affiliate relationships, review them annually, and update them as necessary. (Refer to Finding II-10)	39
III. MAJOR OPERATIONAL ACTIVITIES	41
Recommendation III-1 Conduct an evaluation of a computerized preventive maintenance system. (Refer to Finding III-2)	46
Recommendation III-2 Redesign customer service functions to include a consolidation of activities into fewer locations, adoption of newer call center technologies, and improvement of other business processes. (Refer to Finding III-3)	48
Recommendation III-3 Emphasize increased use of time reporting for allocation purposes once the Accuterm system has been replaced. (Refer to Finding III-4)	67
Recommendation III-4 Begin properly reporting customer data to the Public Service Commission of South Carolina and the South Carolina Office of Regulatory Staff in annual reports. (Refer to Finding III-5)	68
Recommendation III-5 Expedite implementation of a new accounting system to allow for increased automation of the allocation process. (Refer to Finding III-6)	68
Recommendation III-6 Regularly perform audits of affiliate relationships and transactions, with the next one to be performed soon after the Accuterm system has been replaced. (Refer to Finding III-8)	68

Recommendation III-7 Perform a market study to determine when, and if, Bio Tech should be used by South Carolina utilities for receiving the services that Bio Tech provides. (Refer to Finding III-9) 69

Recommendation III-8 Modify internal controls. (Refer to Finding III-10) 69

Recommendation III-9 Investigate the benefits of streamlining rate case processing by consolidating the companies for regulatory purposes into one entity, more in line with how the water utilities are currently managed. (Refer to Finding III-11)..... 75

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Recommendation IV-1 Require mandatory management reviews of employee performance and adapt a more 360°-like review process across all employees. (Refer to Finding IV-1) 85

Recommendation IV-2 Complete the process to develop accurate and standardized job descriptions and salary ranges for all positions. (Refer to Finding IV-2) 86

Recommendation IV-3 Develop a plan to ensure that all employees receive vital personnel information in a timely and consistent manner. (Refer to Finding IV-3) 87

Recommendation IV-4 Establish a mission statement and associated goals and objectives for Human Resources. (Refer to Finding IV-4) 87

Recommendation IV-5 Formalize executive compensation procedures and regularly perform studies to identify appropriate executive pay levels. (Refer to Finding IV-5)..... 88

Recommendation IV-6 Develop a written network infrastructure plan consistent with the needs of the new billing and accounting systems and network users needs. (Refer to Finding IV-8, Finding IV-9, and Finding IV-11) 92

Recommendation IV-7 Place greater emphasis on ongoing training and certification in the IT Department. (Refer to Finding IV-10)..... 93

II. Basic Corporate Decision-Making

A. Analytical Discipline

1. **Analytical Discipline:** Review the reports and studies relied up by the Board of Directors and top management in reaching major policy and investment decisions, especially the extent to which indirect as well as direct costs and benefits are determined and financial risks are formally weighed.
-

Findings

Finding II-1 The Board of Director's involvement in the oversight of Utilities, Inc. (UI) operations has varied with UI's ownership.

Utilities, Inc. was created and owned from 1965 to 2001 as a closely-held company by members of the original 10 families that formed the company in 1965. Over that time, the number of shareholders had grown from the original 10 to approximately 400 different members of the families. For various reasons, a decision was made to sell the company to outside investors in the 2000 – 2001 timeframe, resulting in the eventual sale to n.v. Nuon (Nuon) in early 2002. Nuon is a large energy company based in the Netherlands, active in the generation, marketing, sale, and distribution of electricity, gas, and heat, as well as related products and services.¹

In 2002, the membership of the Board of Directors was changed to a four member Board that included two inside members (the Chairman and Chief Executive Officer and the President of Utilities, Inc.) and two members from Nuon. Board meetings were held on approximately a quarterly basis with many of the meetings being done via teleconference or by consent. The primary items discussed dealt with arranging Utilities, Inc. credit facilities and the evaluation, compensation, and incentive bonuses of the Chairman/Chief Executive Officer and the President. There is little indication that Nuon was actively involved in the oversight of Utilities, Inc. management and operations. Almost from the beginning of Nuon's ownership of Utilities, Inc., Nuon began to pursue divesting Utilities, Inc. This divestment was in line with Nuon's strategy to concentrate its energy business in the Netherlands, Belgium, and Germany.²

As a result, on May 14, 2005, Hydro Star, LLC, a subsidiary of AIG Highstar Capital II, L.P. and certain of its affiliates (Highstar II), entered into a stock purchase agreement to acquire 100% of the stock of Utilities, Inc. from a subsidiary of Nuon. The transaction for the purchase of Utilities, Inc. closed in early 2006. Highstar II is a group of private equity funds that invest in infrastructure related assets and businesses. Highstar II is sponsored by AIG Global Investment Group (AIGGIG). AIG Global



Investment Group comprises a group of international companies that provide investment advice and market assets management products and services to clients around the world. AIGGIG member companies are subsidiaries of American International Group, Inc. (AIG). American International Group, Inc. is a leading international insurance and financial services organization, with operations in approximately 130 countries and jurisdictions. AIG's common stock is listed on the New York Stock Exchange, as well as the stock exchanges in London, Paris, Switzerland, and Tokyo.³

The current Board of Directors for Utilities, Inc. is composed of five individuals, as shown in *Exhibit II-1*. Only one of the Board members is an inside member, the President and Secretary, whereas the remaining members are all from Hydro Star. The current plan is for this Board to meet on a quarterly basis. This Board is expected to approve operations and maintenance capital budgets.⁴

**Exhibit II-1
Board of Directors Membership**

Board Member	Position	Affiliation
John Stokes	Chairman and Chief Executive Officer	Hydro Star/Utilities, Inc.
Larry Schumacher	President and Secretary	Utilities, Inc.
Aaron Gold	Board member	Hydro Star
Mike Walsh	Board member	Hydro Star
Michael Miller	Board member	Hydro Star

In addition to the Board of Directors, much of the day-to-day decision making will become the responsibility of the Operating Committee, which is composed of the following individuals shown in *Exhibit II-2*.⁵

**Exhibit II-2
Operating Committee Composition**

Committee Member	Position
Larry Schumacher	President and Secretary
Lisa Crossett	Chief Operating Officer
Steve Lubertozzi	Vice President and Chief Regulatory Officer
Danny Delgado	Vice President and Treasurer
Holly Roth	Vice President of Administrative Services
TBD	General Counsel

Finding II-2 It was not possible to determine the role that the Board of Directors will play in the oversight of WSC utility companies.

Schumaker & Company reviewed Board meeting minutes for the last couple of years – with most of those minutes created under the prior ownership group. Those minutes dealt primarily with creation of credit facilities and the determination of the Chairman and President salary and incentive awards, with little discussion of the strategic direction of Utilities, Inc. nor approval of capital or operations and maintenance budgets. There was no indication of the existence of any Board committees, such as an audit committee, compensation committee, etc. In short, since Utilities, Inc. is privately held, the existence of the Board is more for “legal” purposes (all corporations are required to have Board and hold meetings whether public or private in nature) than actual governance and oversight of Utilities, Inc.

As a privately-held utility, many of the expectations that might be expected of a utility Board do not exist – in particular compliance with Sarbanes Oxley requirements, Security and Exchange Commission requirements, inclusion of outside directors, etc. Although these requirements might apply at the parent company level, if it is publicly-traded parent, they would not necessarily be implemented at the wholly-owned subsidiary level.

WSC management has indicated that it expects the current Board, composed of capable individuals will take a more active role in the oversight of WSC Corporation. At this time, it is expected that the Board of Directors will be approving the capital and operating budgets in the February timeframe. However, since at the time of our review the Board had yet to meet, it was not possible to determine the actual role that the Board will assume.

Finding II-3 The Operating Committee (not a Board committee but a management committee) is the primary oversight group for utility operations.

Although it is too early to tell the actual role that the new Board of Directors will have in the oversight of Utilities, Inc. operations, the Operating Committee handles most of the decisions regarding the operations of Utilities, Inc.. Prior Boards of Directors had had little involvement in the oversight of Utilities, Inc. preferring to leave those responsibilities with the Operating Committee.

Recommendations

Recommendation II-1 Require the Operating Committee to maintain meeting minutes and appropriate documentation to show how major policy and investment decisions are made. (Refer to Finding II-1, Finding II-2, and Finding II-3)

As a regulated entity in not only South Carolina but many other states, Utilities, Inc. needs to be able to demonstrate that it has managed its utility operations appropriately. As a privately-held utility, many of



the safeguards that exist for publicly-traded utilities do not necessarily apply. However, the Public Service of South Carolina is charged with making a determination on rates that are based on costs and sound business practices. A clear documentation trail is a requirement to making such a determination.

B. Planning Concepts and Practices

2. **Planning Concepts and Practices:** Review the extent to which regulatory changes are evaluated and responded to. Review how these changes impact operational and budgetary decision-making.

The creation and implementation of formalized planning processes is a critical management process that needs to exist within any organization. Various planning processes would be expected to exist within an organization, but for the purposes of our review, we concentrated on two major processes:

- ◆ Strategic planning
- ◆ Corporate planning and budgeting, including:
 - ◆ Capital program planning
 - ◆ Headcount planning
 - ◆ Operations and maintenance planning

Strategic planning is a process that an organization undertakes to determine its overall mission and higher-level business goals and objectives. The process looks at the strengths, weaknesses, opportunities, and threats that an organization faces in setting its overall missions and specific business goals and objectives.

Corporate planning and budgeting is a process whereby lower-level business (departmental) goals and objectives are determined and agreed to throughout the organization. Not only are specific departmental goals and objectives set, but, as a minimum, annual budgets are determined within the various organizational divisions of the organization. These budgets are typically broken down into capital dollars and expense (operations and maintenance) dollars.

Findings & Conclusions

Finding II-4 The Utilities, Inc. strategic planning process is inadequate.

According to information from our interviews, Utilities, Inc. maintains a formal written strategic plan, which is a five-year plan with financial projections.⁶ However, when we requested a copy of the document, we were not provided with such a document. The capital plan and financial projections are only a small part of a strategic plan.

In Schumaker & Company's experience, a formal strategic planning process results in a written strategic plan document that is shared throughout the organization. It minimally includes a mission and vision statement, goals and objectives, as well as an overall financial plan. In many cases, the organization undertakes what is called a SWOT (strengths, weaknesses, opportunities, and threats) analysis in formulating its strategic plan. The lack of such a written document can only mean that the strategic planning process, to the extent it is undertaken, is only documented in the minds of senior management. Although many small organizations exist without formal strategic planning processes in place, an organization the size of WSC should have undertaken a formal strategic planning process and developed the appropriate documentation to communicate the results throughout the organization.

Finding II-5 Corporate planning and budgeting processes are evolving but could be improved.

Utilities, Inc. has adopted more formal business planning processes for all capital, headcount, and operations and maintenance expenditures. At the present time, these processes are primarily manual processes, albeit Excel spreadsheets and an Access database are being developed to support the effort. WSC has currently undertaken a software selection process that will replace some of its internal systems that will probably also have an impact on the planning and budgeting processes. Much of the information used in the processes has to be extracted from company systems to be manually loaded into Excel spreadsheets. The information in these spreadsheets is circulated to the appropriate personnel for input, review, and approval.⁷

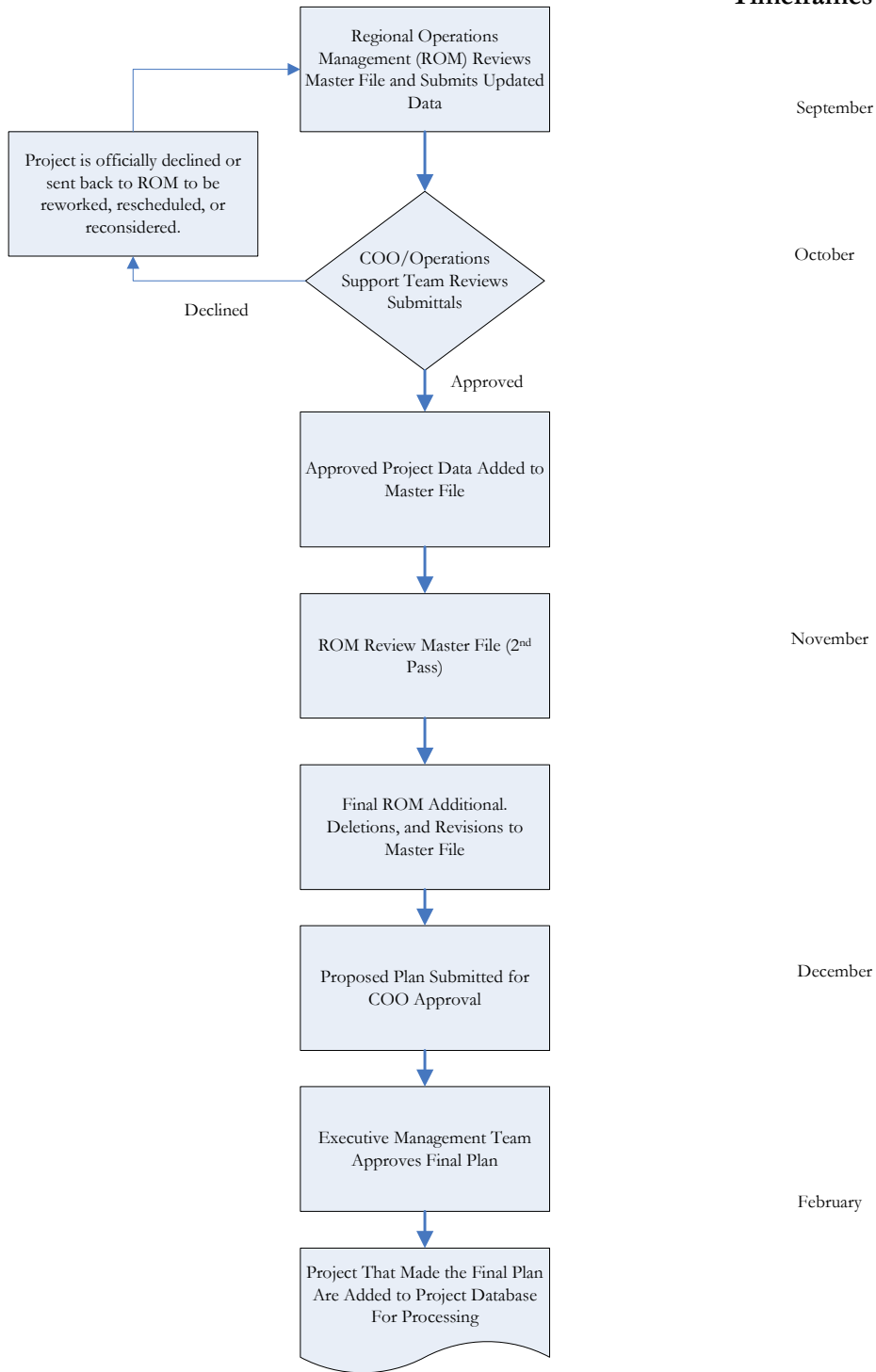
Capital Program Planning

Capital program planning is essentially a "bottoms-up, top-down" process. The capital plan is a five-year plan, with a quarterly spending plan for the first two years and an annual spending plan for the last three years.⁸ This process is schematically shown in *Exhibit II-3*.⁹



**Exhibit II-3
Capital Program Planning Process**

Timeframes



All projects of over \$5,000 are identified as an individual line item. Capital projects in excess of \$25,000 also require a project timeline.¹⁰ Information on vehicle purchases and information technology purchases is added to the total capital program as a separate process.¹¹

Individual capital projects are presented for consideration by regional and area managers within each region and state. These individual projects are maintained in either the Capital Projects Database or individual Excel spreadsheets during the review and evaluation process. The current accounting system does not have a planning module.¹² There are currently approximately 3,000 individual projects within the database at this time. These projects are then summarized and ranked according to predetermined criteria, such as:¹³

- ◆ Needed for safety
- ◆ Needed for regulatory compliance – Environmental Protection Agency, etc.
- ◆ Cost/benefit
- ◆ Regulatory environment – expected return allowed, requirements for placing in rate base, etc.
- ◆ Others

Each of these criteria is given a weighting and projects are chosen for implementation based on the highest rankings until the capital funding is spent. The overall capital budget dollars amount is determined with the financial area in conjunction with the Board to meet certain financial commitments. Once the individual projects have been identified for the capital program, the capital program is presented and approved by the Board of Directors in the February timeframe.¹⁴

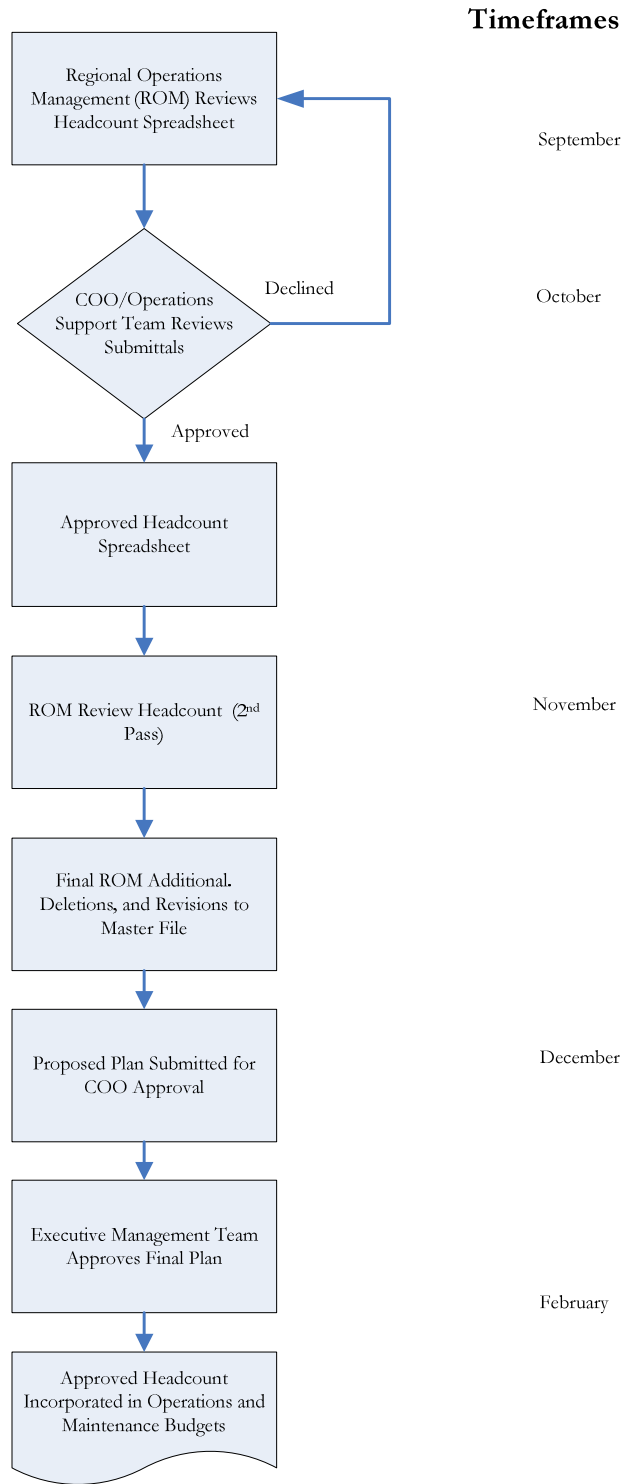
Once a project has been approved as a part of the capital program, it still goes through a series of approvals prior to the commencement of work.¹⁵ This approval process is facilitated with the Capital Project Database. During the year budget-to-actual performance on individual projects is measured by extracting information from the various work orders in the accounting system and uploading (electronic and manual) the information into the Capital Project Database. The current accounting system does not maintain budget information.¹⁶

Headcount Planning

A very similar process is used for headcount planning. The headcount plan is a five-year plan with a quarterly spending plan for the first two years and an annual spending plan for the last three years. Payroll information from the prior year is downloaded from the Water Services Corporation payroll vendor, Automatic Data Processing (ADP), and templates are created for circulation to the responsible regional manager and business managers in the regions. The headcount planning process is schematically shown in *Exhibit II-4*.¹⁷



**Exhibit II-4
Headcount Planning Process**



Individual Excel spreadsheet templates are created for circulation among the various responsible managers within Water Services Corporation, Inc.

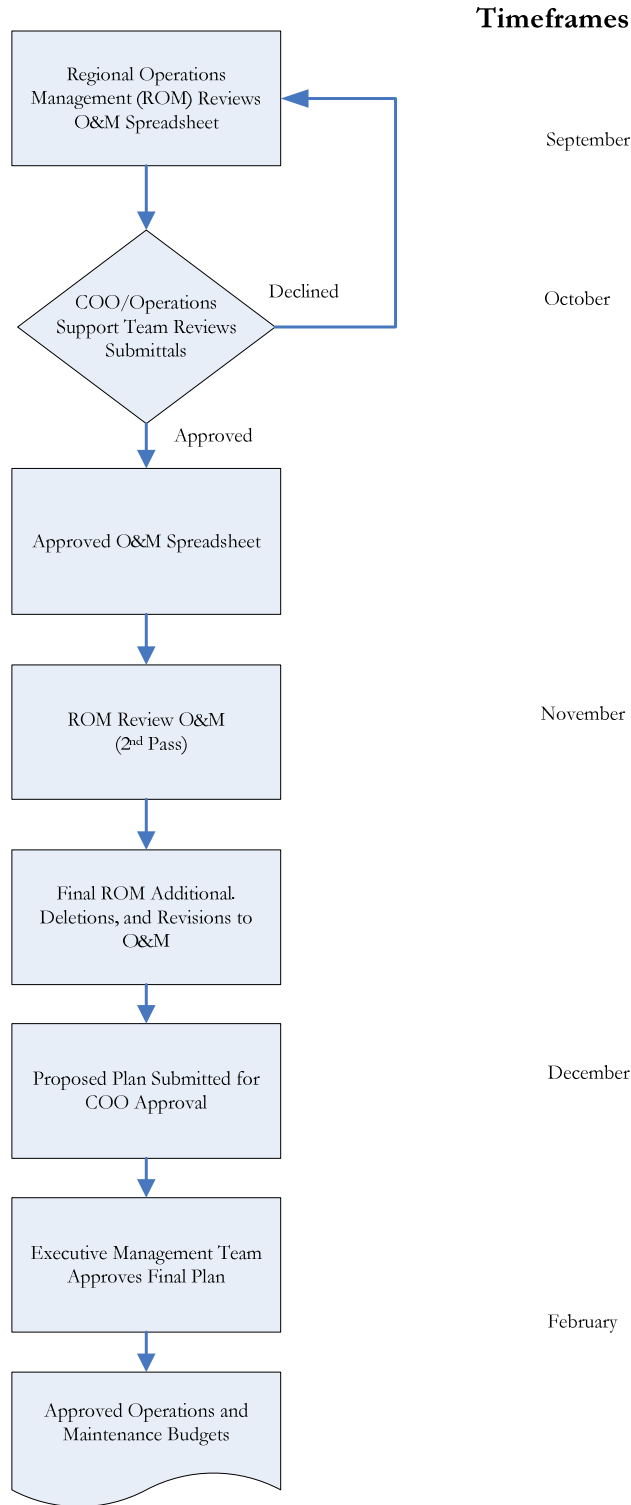
Operations and Maintenance Planning Process

Headcount planning to a large extent drives the operations and maintenance budgets. A very similar process is used for operations and maintenance planning. The headcount plan drives the salaries portion of the operations and maintenance budget. In addition to staffing costs, supplies and materials are added to the operations and maintenance budget to create the complete operations and maintenance plan.¹⁸ These costs are estimated based on prior year actual expenditures modified for expected future changes – i.e. such as the price of fuel and other cost changes.

The operations and maintenance plan is a five-year plan with a quarterly spending plan for the first two years and an annual spending plan for the last three years. The operations and maintenance planning process is schematically shown in *Exhibit II-5*.¹⁹



**Exhibit II-5
Operations and Maintenance Planning Process**



Tracking and Reporting

Various reports are produced on a monthly basis for monitoring conformance to operations and maintenance and capital plans, specifically:²⁰

- ◆ Monthly Headcount Report
- ◆ Monthly Capital Expenditures Report
- ◆ Monthly Construction Work In Process
- ◆ Monthly Vehicle Report
- ◆ Monthly Information Technology Report
- ◆ Monthly Capital Spending Less Than \$5,000
- ◆ Monthly Capitalized Time Report
- ◆ Monthly Projects Placed In Service
- ◆ Monthly Fines and Penalties
- ◆ Monthly Operations and Maintenance Expenditures – Current Month, Year to Date, Comparison to Last Year
- ◆ Monthly Gasoline Expenditures

Finding II-6 WSC corporate planning processes are not being adequately supported by its current information (computer) systems.

WSC has developed formal corporate planning processes. The corporate planning processes identified at WSC, although more manual and labor intensive than they should be, are reasonable. The processes involve input from the various regions as to the projects required, desired headcount levels, and operations and maintenance expenditures requirements. Each process involves several iterations between the regional and headquarters personnel in developing the final approved plans. The processes could be improved with better information (computer) systems.

Finding II-7 The tracking of the adherence to corporate plans could be improved with the implementation of better information (computer) systems.

Just as the development of the corporate plans is hindered by a lack of good computer systems, the tracking of the adherence to the corporate plans is a manual process. The current accounting system does not support the budgeting process – more specifically it does not permit budget amounts to be entered into the system, from which to create budget-to-actual reports of any nature.



Recommendations

Recommendation II-2 Implement a formal strategic planning process. (Refer to Finding II-4)

A formal strategic planning process results in a written document that is shared throughout the organization. It should include a mission and vision statement, goals and objectives, as well as an overall financial plan. A SWOT analysis should be undertaken as a part of the development of the initial strategic plan. The strategic plan should be reviewed and approved by the Board of Directors each year. Furthermore a process should be implemented for periodically updating the strategic plan.

Recommendation II-3 Continue to improve corporate planning and budgeting processes. (Refer to Finding II-5, Finding II-6, and Finding II-7)

WSC corporate planning and budgeting would be improved with more formal documentation and computer support. Schumaker & Company consultants recognize that WSC adoption of newer computer systems (which WSC was currently in the process of evaluating during our review) will have an impact on not only the processes involved in capital, headcount, and operations and maintenance planning process but also the tracking of adherence to corporate plans. Once these computer systems are selected, newer, modified business processes should be created that need to be documented for corporate-wide use.

C. Organizational Design

3. **Organizational Design:** Review the extent to which the roles and authorities of and relationships among the Board of Directors and management staff of Water Services Corporation and its affiliate companies have been defined. Review any overlap or inconsistency of duties and responsibilities between corporate staff and the staff of the subsidiary companies. Review the relations between subsidiaries and other affiliate companies of Water Services Corporation. Consider benefits of consolidation or merger of affiliated companies.

Organization Structure

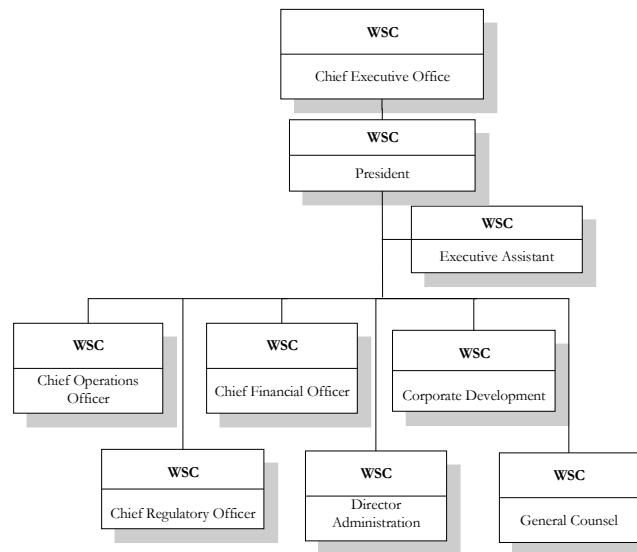
Findings & Conclusions

Finding II-8 The regional organization adopted by Utilities, Inc. is similar to other water companies.

Utilities, Inc. is organized in a regional structure with many of the common functions being centralized in Water Services Corporation in Northbrook. In actuality, all Utilities, Inc. personnel are employees of Water Services Corporation. The costs associated with each employee are allocated to the appropriate operating utility for regulatory purposes only.

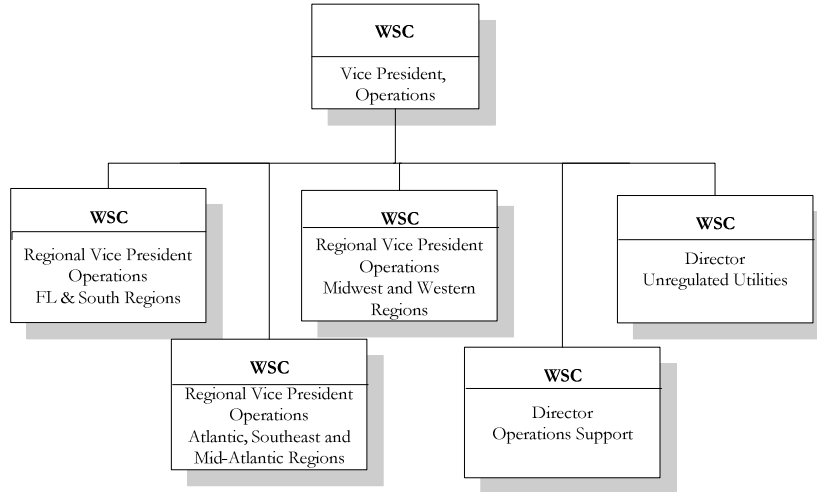
The organization of Water Services Corporation is shown in *Exhibit II-6*.

**Exhibit II-6
Water Services Corporation Organization**



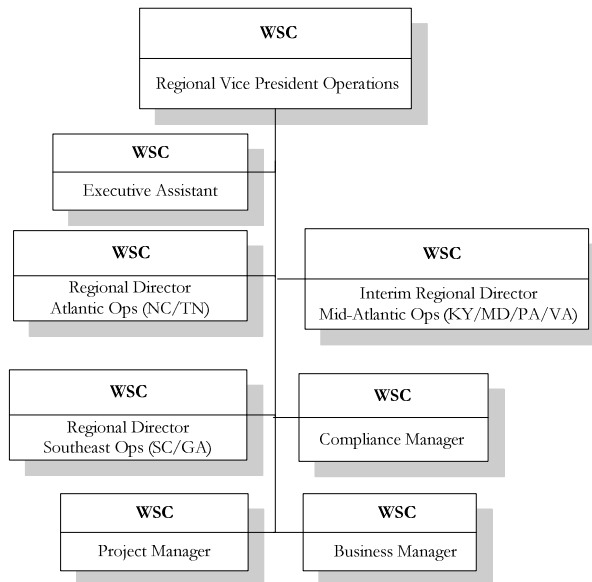
The regional organization reports to the Vice President of Operations. There are six regions as shown later in *Exhibit II-12*. The regions report to a Regional Vice President with each Vice President generally being responsible for multiple regions, as shown in *Exhibit II-7*.

**Exhibit II-7
Regional Operations Organization**

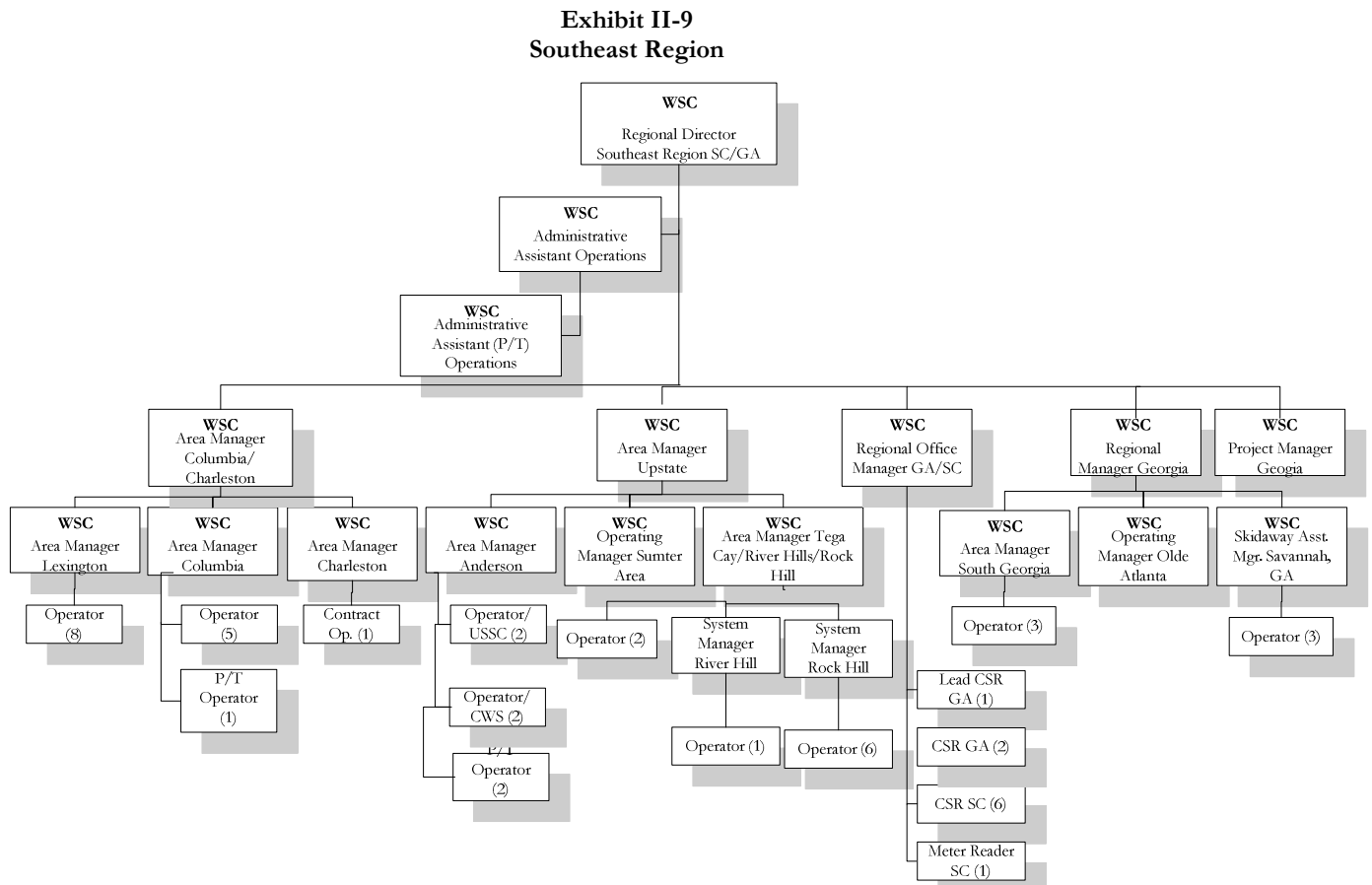


Each region is headed by a Regional Director that reports to the Regional Vice President, as shown in *Exhibit II-8*.

**Exhibit II-8
Regional Organization**



In addition to the Regional directors, each Regional Vice President’s office is staffed with a Business Manager, a Compliance Manager, and a Project Manager – although not all of these positions are filled at this time. The Southeast Region, in which the South Carolina utilities are located, is shown in *Exhibit II-9*.



The WSC departments that serve South Carolina, and their functional objectives, are as follows:²¹

- ◆ Accounting – to accurately depict the financial records for all Utilities, Inc. entities, including South Carolina entities
- ◆ Administrative – to accurately field phone calls and actively assist other departments
- ◆ Billing and technology – to maintain an accurate billing system to send precise and timely billing information to customers; also includes regular system upkeep, upgrades, and maintenance
- ◆ Customer services – to maintain and assist in satisfying customer needs
- ◆ Executive – to meet the company needs as a whole

- ◆ Human resources – to develop, implement, and administer company programs, policies, and employee benefits; also responsible for ensuring company compliance with government regulations as those regulations pertain to HR matters
- ◆ Operations – to continuously provide safe and reliable water/wastewater services to customers
- ◆ Regulatory – to assess regulatory matters and file rate proceedings to ensure that Utilities, Inc. companies are earning their appropriate return on equity; it also assists in acquisitions and divestitures that require commission approval

Recommendations

None

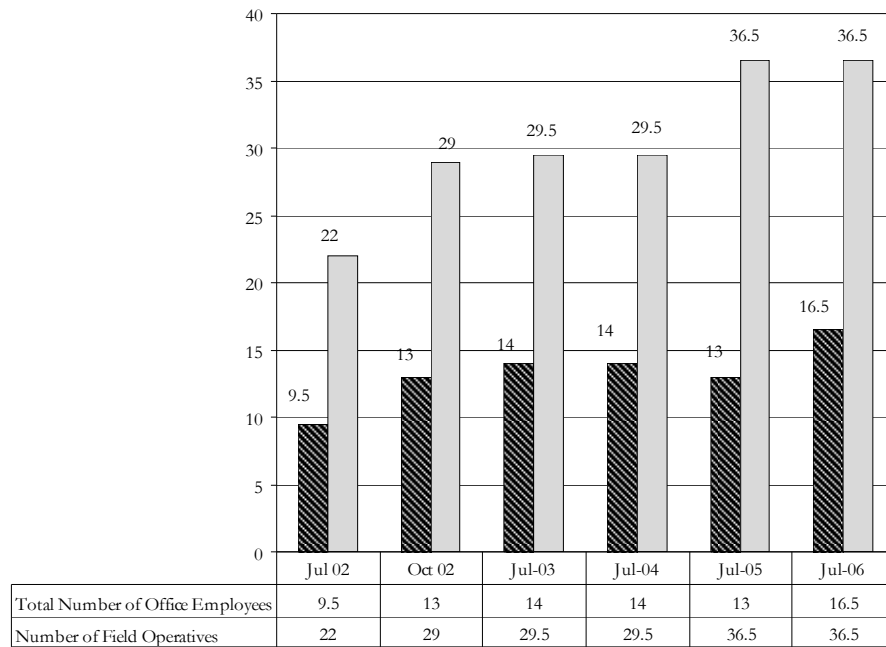
Staffing Levels

Findings & Conclusions

Finding II-9 **Staffing levels in South Carolina have increased over the last five years in response to regulatory requirements.**

Exhibit II-10 displays staffing levels for office and field operative employees in South Carolina by year.

**Exhibit II-10
Regional South Carolina Staffing
(2002-2006)**

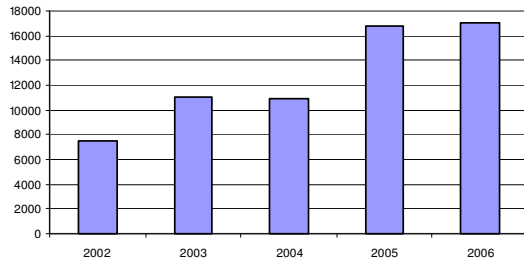


Staffing levels in South Carolina increased in October 2002 with the acquisition of additional water systems in South Carolina. Since that timeframe, the number of office employees has increased slightly from 14 to 16.5. However, in 2005, field forces level increased significantly. This increase, according to WSC management, was due to regulatory requirements for the South Carolina Department of Health and Environmental Control (DHEC) requiring facility checks be done on a 7 day per week, 365 day per year basis.

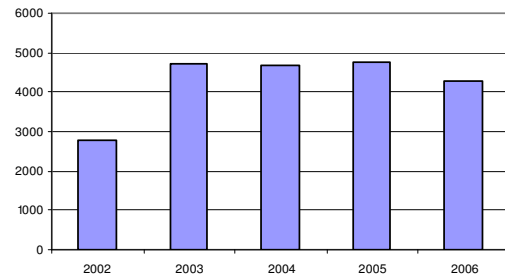
Exhibit II-11 illustrates various ratio statistics.

**Exhibit II-11
Ratio Statistics**

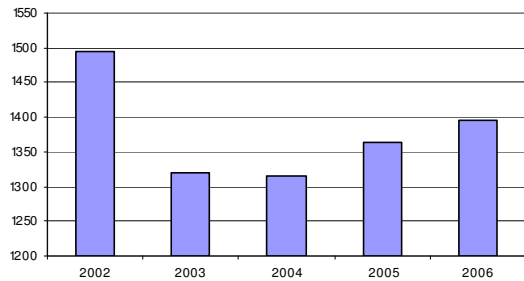
Customers/Regional Area Operations Manager



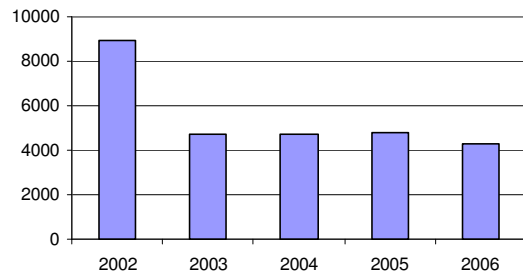
Customers/Manager



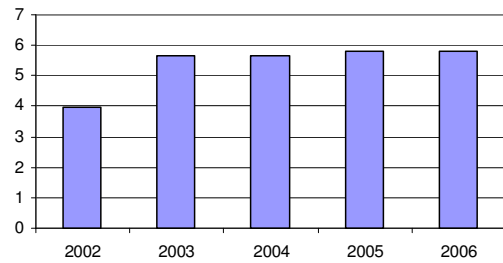
Customers/Operator



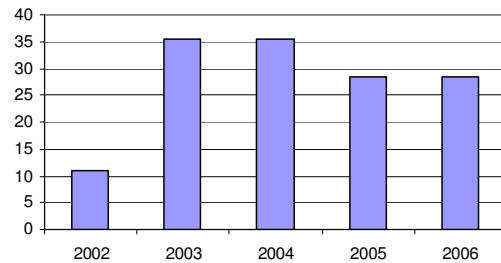
Customers per CSR



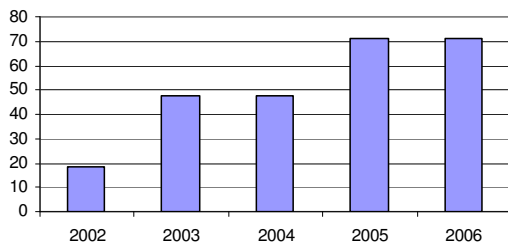
Systems per Operator



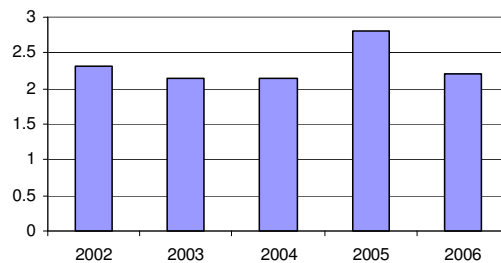
Systems per Area Manager



Systems per Regional/Area Operations Manager



Ratio of Field to Office Staff



Recommendations

None

Affiliate Relationships

With regard to affiliated relationships, Schumaker & Company conducted an in-depth review of the affiliated interests of WSC that impact its regulated utility operations in South Carolina. In this case, an affiliated interest is defined as a business entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with the regulated utility. Control is defined as the power to dictate or influence the policy of an entity, whether through the ownership of voting securities, by contract, or otherwise. The focus of this area was to determine the extent to which, if at all, WSC ratepayers are compromised by WSC's plans or activities in relation to affiliated interests. (Specifics of cost allocation related to affiliate relationships will be addressed in *Work Plan Area 5 – Revenue/Cost Allocation*.)

Organization Overview

The five regulated utilities in South Carolina include:

- ◆ Carolina Water Service, Inc. (CWS)
- ◆ Tega Cay Water Service, Inc. (TCWS)
- ◆ Utilities Services of South Carolina, Inc. (USSC)
- ◆ Southland Utilities, Inc. (SU)
- ◆ United Utility Companies, Inc.(UUC)

Carolina Water Service, Inc.

Carolina Water Service, Inc. is a public utility providing water supply/distribution service and wastewater collection/treatment services. CWS is one of four Class A water/wastewater utilities in South Carolina. Its service area includes portions of Aiken, Beaufort, Charleston, Dorchester, Georgetown, Lexington, Orangeburg, Richland, Sumter, Williamsburg, and York counties. According to customer records for the test year ending June 30, 2004, water services, including distribution, were provided to 5,653 residential and 170 commercial customers. Of these customers, 2,774 were provided water distribution service. Likewise, wastewater collection and/or treatment services were provided to 9,729 residential and 181 commercial customers, including one wholesale customer, Midlands Utility, Inc. Wastewater collection services were provided to 2,213 of these customers.²²

In 2004, CWS applied to the Public Service Commission of South Carolina (PSC) for a rate increase for its water and wastewater customers. The rate case was heard by the PSC in Docket 2004-357-WS in May, 2005. Although the Office of Regulatory Staff's (ORS) financial audits of CWS conducted prior to the rate hearing did not indicate any particular issue with the company's books and records, the number



of rate increases over the years and the level of the company's prices raised enough concern to justify performing this study.²³

Tega Cay Water Service, Inc.

Tega Cay Water Service, Inc. is a public utility providing water supply service and wastewater collection/treatment service. TCWS is a Class B water and wastewater utility in South Carolina. Its service area includes portions of York County. According to TCWS' annual report for the year ended December 31, 2004, water services, including distribution, were provided to 1,713 residential and no commercial customers. Likewise, wastewater collection and treatment services were provided to 1,689 residential and no commercial customers.²⁴

Utilities Services of South Carolina, Inc.

Utilities Services of South Carolina, Inc. is a public utility providing water supply and wastewater collection service. USSC is a Class A water utility in South Carolina and is a Class C wastewater utility. Its service area includes portions of Lexington, Anderson, Richland, Sumter, Abbeville, and York Counties. USSC did not become part of the Water Services Corporation until 2003. According to USSC's annual report for the year ended December 31, 2004, water services, including distribution, were provided to 6,859 residential and no commercial customers. Likewise, wastewater collection and/or treatment services were provided to 467 residential and no commercial customers.²⁵

Southland Utilities, Inc.

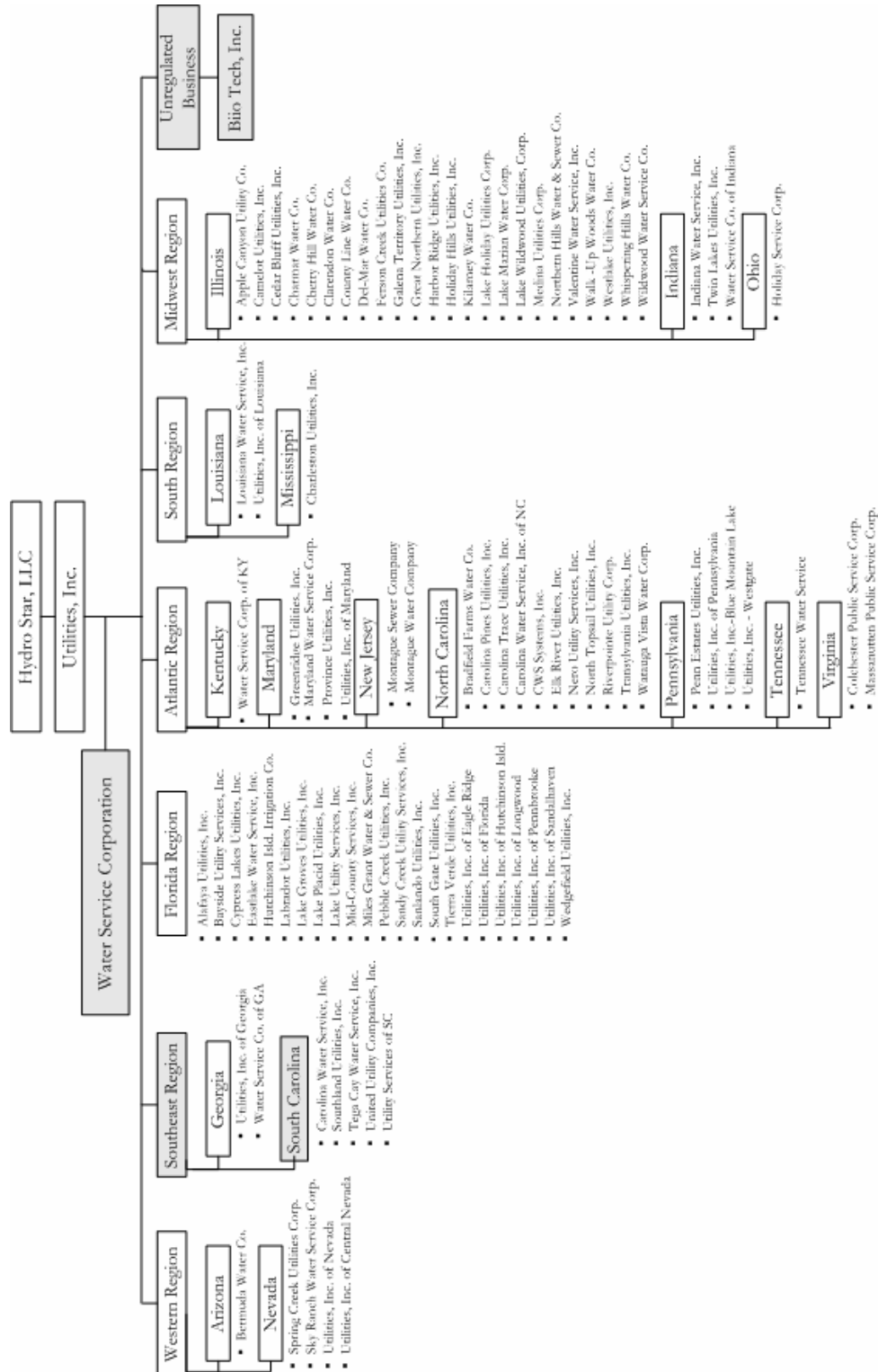
Southland Utilities, Inc. is a public utility providing water supply service. SU is a Class C water utility in South Carolina. Its service area includes portions of Lexington County. According to SU's annual report for the year ended December 31, 2004, water services, including distribution, were provided to 175 residential and no commercial customers.²⁶

United Utility Companies, Inc.

United Utility Companies, Inc. is a public utility providing water supply service and wastewater collection service. UUC is a Class C water utility and a Class B wastewater utility in South Carolina. Its service area includes portions of Cheraw, Anderson, and Greenville Counties. According to UUC's annual report for the year ended December 31, 2004, water services, including distribution, were provided to 95 residential and no commercial customers. Likewise, wastewater collection and/or treatment services were provided to 1,779 residential and no commercial customers. In 2004, South Carolina Utilities, Inc. merged with United Utility Companies, Inc.²⁷

Exhibit II-12 illustrates the Hydro Star organization showing the five South Carolina water utilities and their affiliates.²⁸ Those boxes in *Exhibit II-12* that are highlighted provide services on behalf of South Carolina customers.

**Exhibit II-12
Hydro Star Organization**



Services from Affiliates to South Carolina Utilities

Those affiliates providing services to the South Carolina utilities primarily include the Water Services Corporation (in Northbrook, IL and the Southeast Region in Charlotte, NC) and BioTech organizations, in which the following services have typically been provided:²⁹

1. Executive and management services
2. Operations and engineering functions
3. Administrative services, including human resources
4. Billing
5. Information technology services
6. General customer services
7. Accounting functions, including payroll services
8. Regulatory functions
9. Sludge hauling services
10. General repairs and maintenance

Water Services Corporation employees provide the first eight services, while BioTech provides the last two services.³⁰ *Exhibit II-13* displays the dollar amount of services provided by Water Services Corporation to the five South Carolina utilities in total for 2001 to 2005,³¹ which have generally been increasing over the past five years.

Exhibit II-13
\$ Charges for Services Provided by WSC to South Carolina Utilities
(Total)

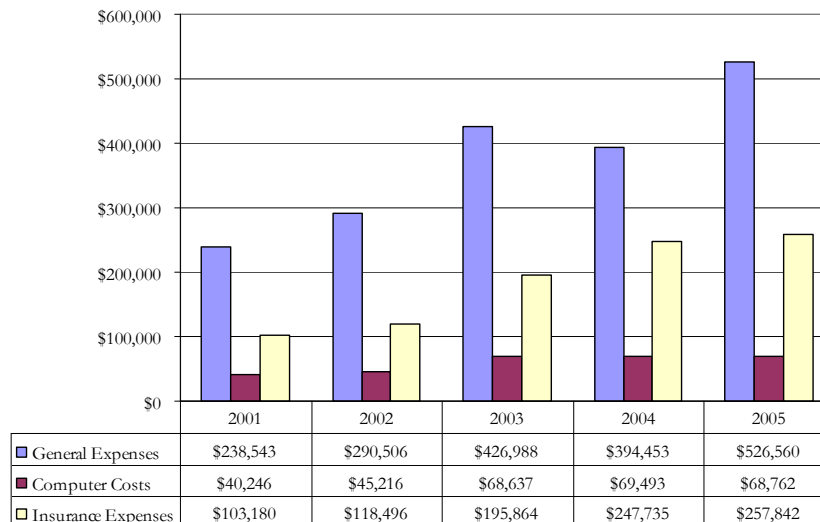


Exhibit II-14 displays the percentage of total WSC allocated charges that the five South Carolina utilities have received each year for the past five years (2001-2005). The percentages have generally been

increasing, although 2004 took a slight dip.

Exhibit II-14
% of Charges for Services Provided by WSC to South Carolina Utilities
(Total)

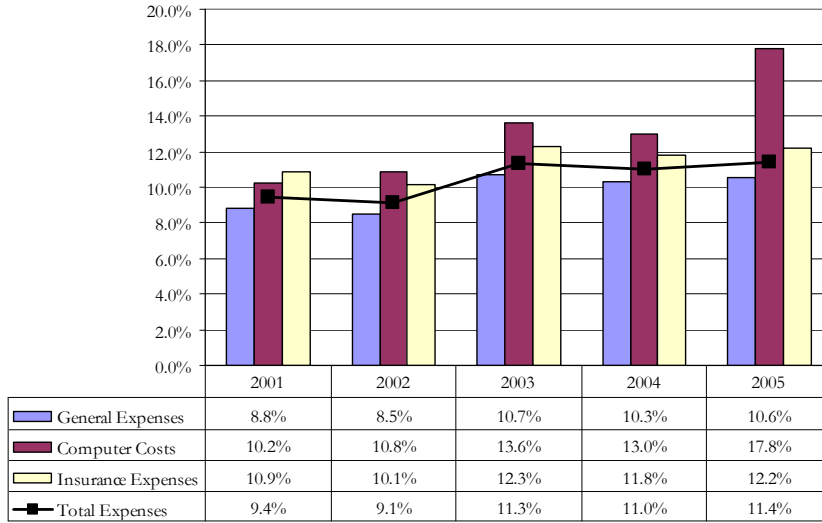


Exhibit II-15 displays WSC charges by year (2001-2005) by major category for services provided to Carolina Water Services.³²

Exhibit II-15
Charges for Services Provided by WSC to Carolina Water Services

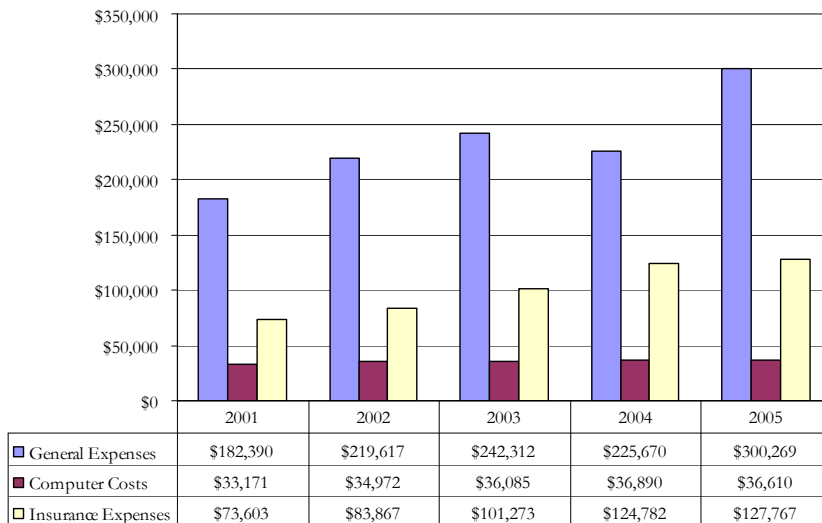


Exhibit II-16 displays WSC charges by year (2001-2005) by major category for services provided to Tega

Cay Water Services.³³

Exhibit II-16
Charges for Services Provided by WSC to Tega Cay Water Service

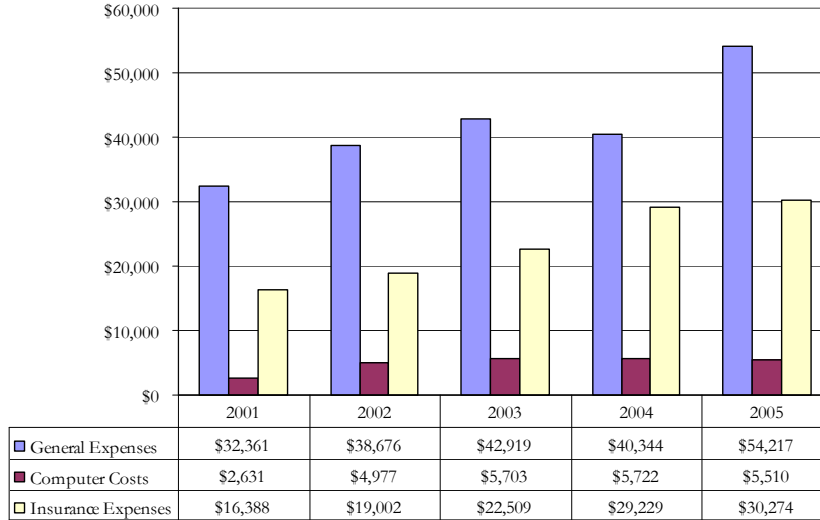


Exhibit II-17 displays WSC charges by year (2001-2005) by major category for services provided to Utilities Services of South Carolina.³⁴ Only 2003 to 2005 data was available, as USSC did not become part of the Water Services Corporation organization until 2003.

Exhibit II-17
Charges for Services Provided by WSC to Utilities Services of South Carolina

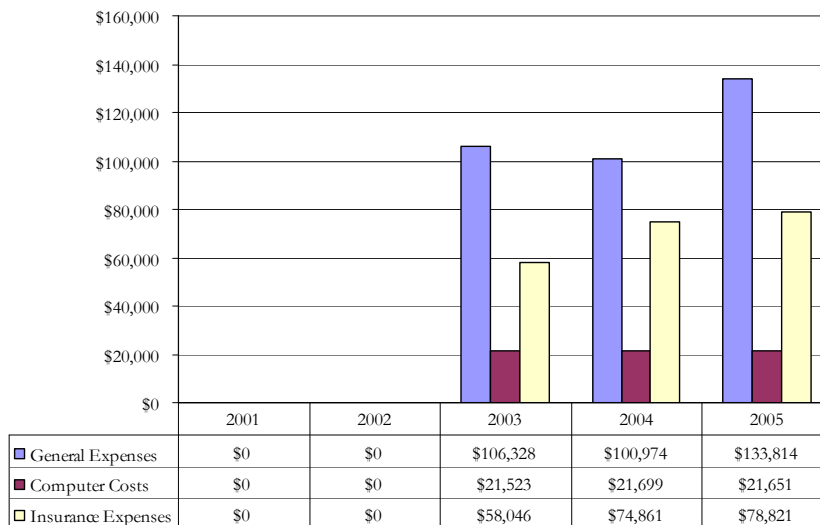


Exhibit II-18 displays WSC charges by year (2001-2005) by major category for services provided to Southland Utilities.³⁵

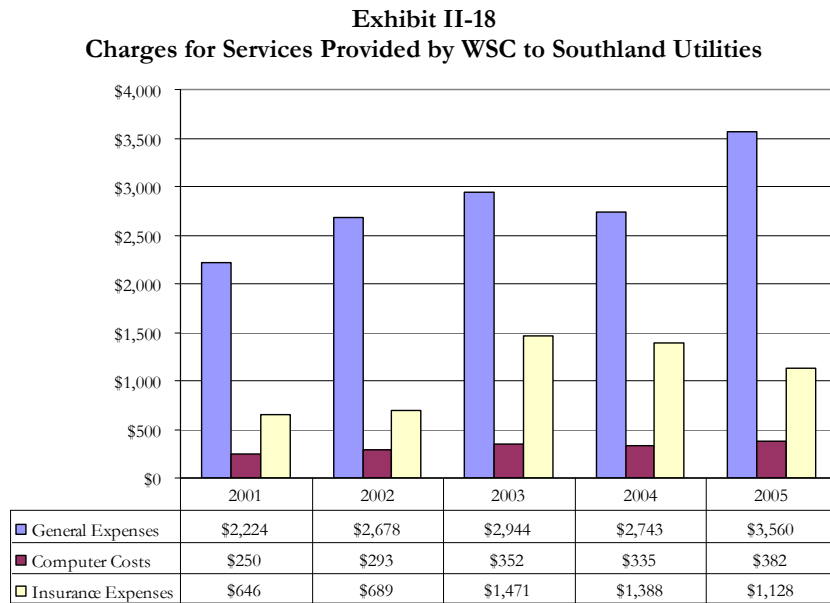
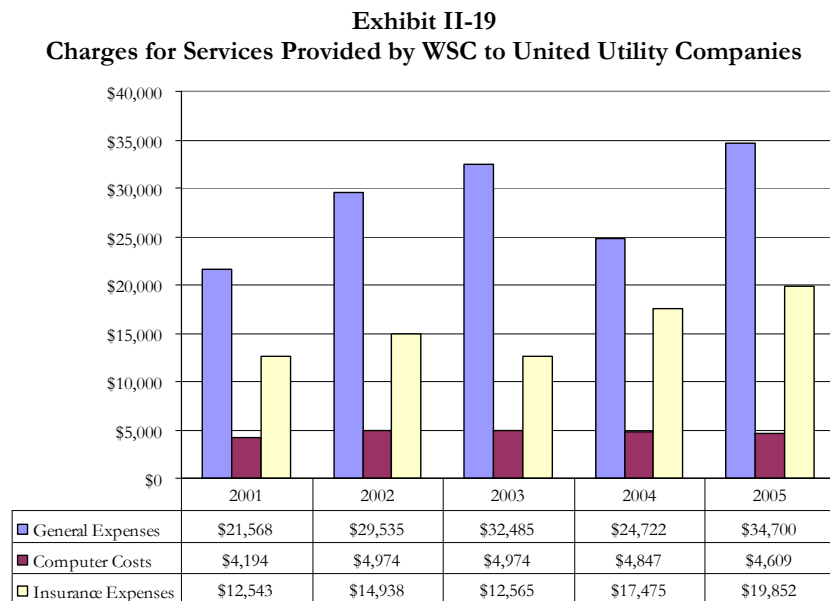


Exhibit II-19 displays WSC charges by year (2001-2005) by major category for services provided to United Utility Companies,³⁶ which includes South Carolina Utilities, Inc., as the latter merged with UUC in 2004.



The Water Services Corporation organization headquartered in Northbrook (Illinois) is the group where most shared services are provided to South Carolina utilities, although the Charlotte (North Carolina) regional office also provides shared services to South Carolina utilities.³⁷ All of these, including facilities, systems, and programs, are handled via the allocation methodology described in *Chapter III – Major Operational Activities*.

There is an agreement in place for services provided by Water Services Corporation to regulated utilities,³⁸ but none exists for services provided by Bio Tech to the regulated utilities.³⁹ The charges from Bio Tech to South Carolina utilities are not based on cost allocations; instead all charges from Bio Tech to individual South Carolina utilities sent are via invoices, from which payment is made via Water Services Corporation's accounts payable system.⁴⁰

No other affiliate transactions involving transfer of employees, property, and/or technology exist according to WSC management.⁴¹

Services from South Carolina Utilities to Affiliates

No services were provided by the South Carolina utilities to its unregulated affiliates,⁴² although South Carolina employees sometimes provide services for multiple utility organizations in South Carolina. These allocations, as well as those from Water Services Corporation, are described in *Work Plan Area 5 – Revenue/Cost Allocation*.

Findings & Conclusions

Finding II-10 The relationships of UI affiliates are not appropriately documented.

Proper documentation does not currently exist for affiliate relationships within the UI organization. Regarding South Carolina utilities, minimally Schumaker & Company expected to see at least two up-to-date contractual agreements regarding affiliate relationships, specifically one for Bio Tech services provided to South Carolina utilities and one for Water Services Corporation services provided to South Carolina utilities.

In the first case, Bio Tech, a formal agreement does not exist.⁴³ Instead, Bio Tech invoices the South Carolina utilities whenever it provides services. Although requested during field work on this project, it was stated by WSC management that we must receive a price sheet directly from Bio Tech, as WSC management would not be able to provide one. Subsequently, during review of the draft audit report, WSC management provided such a price sheet.⁴⁴

In the second, case, the existing agreements for affiliate transactions between Water Services Corporation and South Carolina utilities within the UI organization are out-of-date and not regularly updated.⁴⁵

- ◆ One agreement involving CWS, SU, UUC, South Carolina Utilities (which was later merged into UUC), and other non-Carolina utilities was over 20 years old (dated January 1, 1987) and had not been updated since that time.
- ◆ Another agreement involving TCWS was over 11 years old (dated December 31, 1995) and had not been updated since that time.
- ◆ Another agreement involving USSC was not originally provided during field work on this project, but was subsequently provided by WSC management during review of the draft audit report. This agreement was the newest of the three agreements involving South Carolina utilities (dated September 30, 2002) in which the Chief Regulatory Officer's signature was shown for both Water Services Corporation and USSC.

Schumaker & Company consultants noted additional concerns, such as:⁴⁶

- ◆ All services are not included in the description of services provided by WSC to regulated utilities; human resources and information technology are two examples of services not specifically mentioned.
- ◆ The agreements indicate that costs are distributed (allocated) to regulated utilities “on an annual basis, unless the parent should elect to make a supplementary analysis for a special purpose,” yet WSC in 2005 began routinely allocating costs on a quarterly basis. Schumaker & Company does not consider routine allocation of costs a “special purpose;” therefore, wording needs to be modified to reflect the current situation. Until recently, when allocations were being performed on a yearly basis, the customer numbers used were June customers, thereby creating a type of “average number of customers.” Now that allocations are done quarterly, the customer count for a specific quarter is the count used to determine allocated costs. This wording also needs to be modified.
- ◆ The agreements indicate that “costs will be prorated in proportion to the average number of customers of each operating company during the calendar year” in which each customer of a water company and each customer of a sewer company will be counted as one. These agreements also state that “each customer of a company that provides water and sewer shall be counted as one and one-half,” while “each customer of a water company which is a distribution company only, that is having no source of supply facilities, shall be counted as one-half.” The customer equivalents for availability customers, however, are worded differently in the three agreements. The agreement involving the CWS, SU, and UUC utilities indicates that “each customer whose charge is for the availability of water service shall be counted as one-half,” which does not agree with company documentation provided in *Exhibit III-8*. The agreement also does not specifically discuss availability of sewer service, as the TCWS and USSC agreements do. The TCWS and USSC agreements indicate that “each customer whose charge



is for the availability of water or sewer service shall be counted a one-quarter” and “each customer whose charge is for the availability of water and sewer service shall be counted as one-half,” in which underlining has been provided by Schumaker & Company for emphasis between the two statements. The wording is not comprehensive and in at least one case wrong.

- ◆ Until recently the customer service office for Illinois, Indiana, and Ohio companies was housed in the Northbrook headquarters, therefore, the allocation was weighted heavier to these companies. As this situation changes, corrections to agreements are needed.

These contractual agreements are not regularly reviewed and updated when changes occur.

Recommendations

Recommendation II-4 Develop formal contractual agreements for all affiliate relationships, review them annually, and update them as necessary. (Refer to Finding II-10)

Contractual agreements should exist for all affiliate relationships with all five South Carolina utilities. They should exist not only for services provided by WSC but also for all other non-regulated entities within the UI organization. These agreements should be comprehensive and up-to-date. They should be reviewed annually and updated whenever any changes are required. These agreements should be regularly provided to the South Carolina Office of Regulatory Staff for information purposes.

III. Major Operational Activities

A. Service Levels

4. **Service Levels:** Review whether goals applicable to both system reliability and responsiveness to individual business and residential customers have been set and met. Review contingency plans to ensure system reliability.
-

Water and Wastewater Operations

Schumaker & Company consultants spent several days visiting various Utilities, Inc. facilities to observe the operations and maintenance of these facilities. The facilities included both wastewater treatment facilities and water supply (wells) facilities in the West Columbia and Tega Cay areas and other facilities in and around the Rock Hill and Cherokee County areas of South Carolina. These visits permitted our consultants to observe the facilities and hold information gathering discussions with the operators stationed at some of these facilities.

Findings & Conclusions

Finding III-1 **The water and wastewater facilities appear well maintained and the operators interviewed appear knowledgeable about the operations of the specific facilities.**

Schumaker & Company consultants chose a random selection of facilities to visit in various geographical areas of South Carolina. Photographs of some of the facilities visited are shown in *Exhibit III-1*, *Exhibit III-2*, *Exhibit III-3*, and *Exhibit III-4*.



**Exhibit III-1
Visited Treatment Facilities**



**Exhibit III-2
Visited Well Head Facilities**



**Exhibit III-3
Tega Cay Site Visit**



Exhibit III-4
Briarcreek Wastewater Treatment Visit



The facilities visited appeared to be maintained in reasonable condition. One of the well heads visited was currently undergoing a renovation, including rebuilding of the well head structure and servicing of the pressure tank.

Finding III-2 Preventive maintenance is handled without the benefit of a computerized system or an equipment history database.

Schumaker & Company did not identify any type of preventive maintenance system in use throughout WSC. Preventive maintenance is handled by individual operators based on the knowledge and experience of those individuals. To this point in time, not having a system has been perhaps an acceptable practice; however, when one looks at the overall size of WSC and the commercial off-the-shelf packages that are available for scheduling preventive maintenance, WSC should be considering the implementation of such a business tool.

Recommendations

Recommendation III-1 Conduct an evaluation of a computerized preventive maintenance system. (Refer to Finding III-2)

One of the benefits of WSC's taking over small water systems should be the implementation of better technology for operating the various facilities. In our experience, such a system could not only be used to plan and schedule the performance of preventive maintenance, but also periodic inspections and testing could also be scheduled. In addition, such systems provide a history record for such activities.

Customer Service Functions

Water Services Corporation operates 15 call centers that are geographically located across the country. South Carolina calls go to a facility in South Carolina. Each call center uses a common *Customer Service Manual* for conducting its operations, although the *Customer Service Manual* contains slight variations for items that are specific to a given regulatory jurisdiction – such as deposits, payment terms, etc. All customer service representatives (CSRs) are trained to the *Customer Service Manual*.⁴⁷

Customer service offices operate from 8:00 am to 5:00 pm local time. CSRs are responsible for billing inquiries, service requests, service issues, final bills, and new customers. In addition, each office is sent up to handle walk-in customers for bill payments and inquiries. Final bills are handled in Northbrook (Illinois). WSC does not use an automatic call directors (ACDs) in the customer service offices and, consequently, average speed of answer (ASA) is not measured, i.e., all phones ring at the same time.⁴⁸

CSRs are also responsible for coordinating meter reading activities. In-house or contract meter readers are used to read meters. The system automatically kicks out high meter readings to be reread by a meter reader. If still high, the CSR is responsible for calling the customer to inform the customer of a high bill. Low readings may or may not be checked.⁴⁹

Customer service representatives are also responsible for the processing of all payments. All payments are sent to the local office for processing. CSRs can make payment arrangements. Guidelines exist in the manual, but it varies by state.⁵⁰ Customer telephone numbers are verified on all calls.

The customer service system is essentially the billing system. It does permit searching on last name, account number, and address. It maintains a history of the last 12 invoices (monthly), and a history of calls but only in the notes fields in the system.⁵¹

Service orders are opened to handle complaints. There are approximately 50 types of service orders. Complaint service orders are called out to an area or operations manager for contact with the customer within 24 hours.⁵²

Findings & Conclusions

Finding III-3 Customer service functions need to be improved.

Customer service functions are reasonable given current technologies in use at WSC; however, with the adoption of a newer computer system, customer service activities should be redesigned. Customer service activities are dispersed throughout the WSC organization as follows:

- ◆ Bill creation and mailing – Northbrook
- ◆ Payment processing – Regional
- ◆ Customer Contact Center – billing inquiries, payment arrangements etc. – Regions

The *Customer Service Manual*, which was developed at WSC, identifies many of the policies and procedures in place. The bill generation process is centralized in Northbrook; however, billing inquiries and payment processing are handled at the various field locations. In addition, call center functions are handled at the individual field locations. WSC has not taken advantage of technologies such ACDs and it cannot measure such indicators as average speed of answer, average handling time, etc. – all items that a modern call center would use to monitor its performance.

Schumaker & Company recognizes that WSC is in the process of replacing its customer information systems. At the same time these systems are replaced, the customer service function should be re-engineered to consider some centralization (physical or virtual) of the call center function supported by newer telephone technologies. At the same time, the *Customer Service Manual* will need to be rewritten to conform with these new requirements. We further suggest that the manual be rewritten using Word document production features, so that it could be more easily maintained and made available on an internal website (intranet).



Recommendations

Recommendation III-2 Redesign customer service functions to include a consolidation of activities into fewer locations, adoption of newer call center technologies, and improvement of other business processes. (Refer to Finding III-3)

Over the last ten years with the advent of newer technologies, utilities have been reducing the number of call centers, implementing automatic call director technologies, and implementing various bill payment methods (electronic, credit card, etc.) and bill processing technologies. Utilities develop specific measurements to measure performance in call centers and bill processing centers. Some of these measures would include:

- ◆ Average speed of answer
- ◆ Average handling time
- ◆ % bills processed day received
- ◆ % bills handled manually

Many of these measurements are actually only possible with the installation of certain technologies – none of which WSC currently has employed. Without such indicators, it is not possible to objectively measure performance in the customer service area. Business processes will need to be modified with the adoption of these newer technologies.

B. Revenue/Cost Allocation

5. ***Revenue/Cost Allocation:*** Review the cost allocation plan for corporate overhead, both direct and indirect costs, to the subsidiary companies.

The following pages of this section describe the specific steps to be undertaken in conducting investigations in this work plan task area. We have designed our approach for the revenue/cost allocation area around two specific sub-topics, those being:

- ◆ *Cost accumulation and assignment* – As part of this section, we will address how WSC and its affiliates accumulate and assign costs that are ultimately borne by the ratepayers of South Carolina through intercompany billings.
- ◆ *Direct billing and cost allocation methodologies among affiliates* – Within this section, we will assess the fairness and the appropriateness of the methodology for cost allocations by WSC and its affiliates, as well as any contracts governing this methodology.

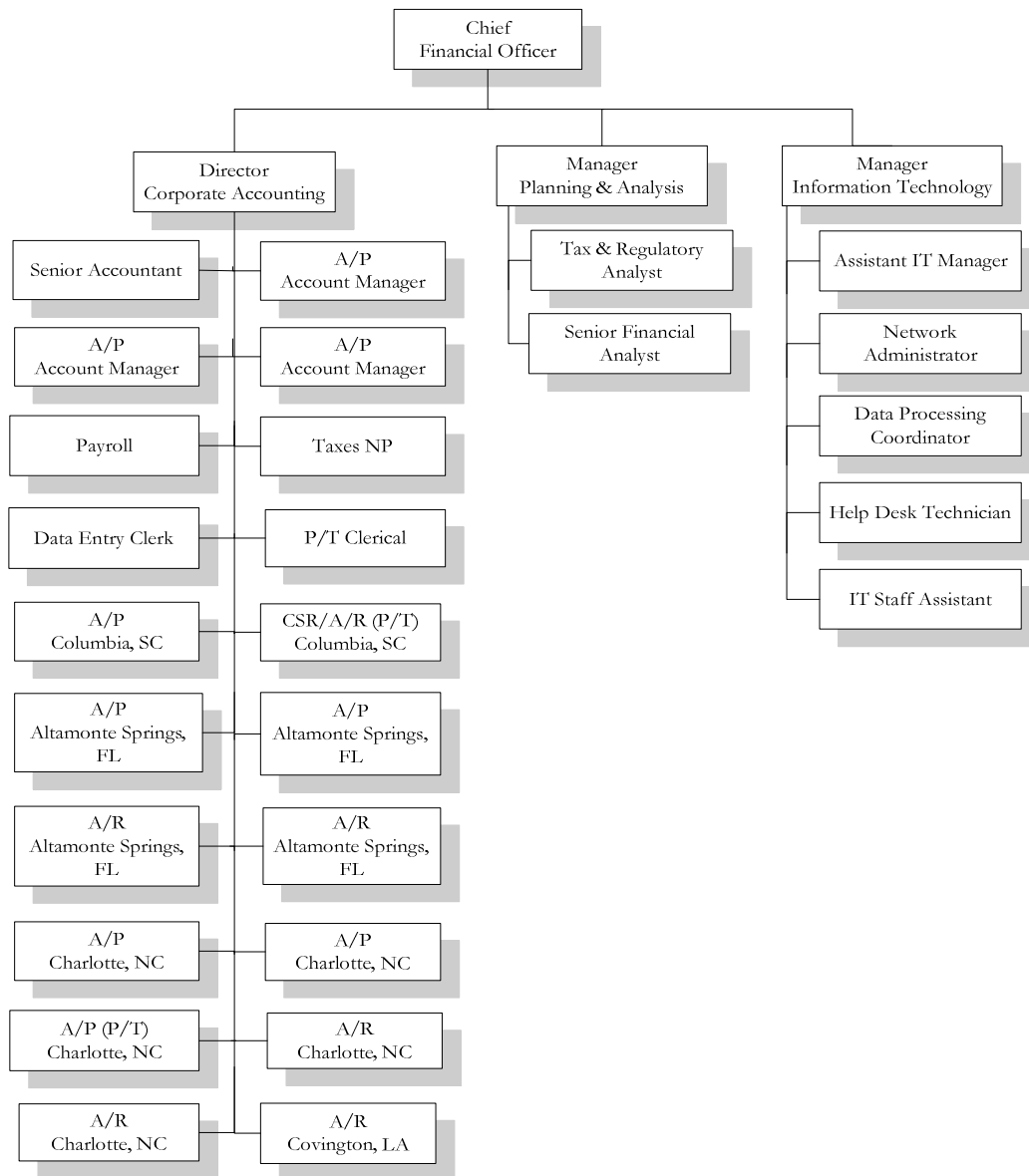
Background Information

This section includes the background information for the Revenue/Cost allocation area.

Organization Overview

Accounting activities involving affiliate transactions are handled in the Chief Financial Officer (CFO) organization, primarily in the Corporate Accounting group, as shown in *Exhibit III-5*.⁵³

**Exhibit III-5
CFO Organization**



Allocation of Costs Methodology Background

In 2001 through 2004, the allocation of costs was done annually. In 2005 Utilities, Inc. (UI) decided to begin doing allocations on a semi-annual basis, and then changed in mid-year to do allocation quarterly. Therefore, in 2005 allocations were done for the period January through June 2005, July through September 2005, and October through December 2005.⁵⁴ In 2006, allocations were being done quarterly.⁵⁵

All WSC costs are charged to UI subsidiaries, both regulated and non-regulated entities. Where applicable, WSC attempts to make payments to vendors, suppliers, or other similar organizations directly charged to a UI subsidiary. If they cannot be directly charged, then an allocation is made (described later). No WSC personnel costs are directly charged to UI subsidiaries; they are only allocated.⁵⁶ Also, WSC allocates costs to UP's operated, but not owned systems, in the same manner as it allocates costs to UP's owned entities. At this time, UI has very few of these systems, which are very small and only operated on an emergency basis by WSC operators. Because customers in these systems benefit from being part of the UI family (even though they are not owned), they receive a small portion of the allocation.⁵⁷

To Schumaker & Company's knowledge, no "operated, but not owned" systems are located in South Carolina.

No WSC costs are allocated to UI as all costs associated with UI are directly charged to its books.⁵⁸ Likewise, no costs of the South Carolina utilities are charged back to WSC or UI, as they currently provide no services to either organization.⁵⁹

Allocation Description by Journal Entry

All UI companies currently use the same chart of accounts in the homegrown accounting system (referred to as Accuterm), which WSC intends to replace soon.⁶⁰ However, allocation of common WSC expenses is based on five separate Excel spreadsheets, in which information is entered manually from the accounting system. These spreadsheets (which are nearly 10 years old, although they have been modified during that time period) are used quarterly to create journal entries, which are then uploaded to the accounting system to transfer costs to UI subsidiaries, including the South Carolina utilities.⁶¹ These journal entries include:

- ◆ Standard Entry (SE) 50: Direct operator and regional office salaries and benefits
- ◆ SE 51: Direct computer expenses
- ◆ SE 52: Direct insurance expenses
- ◆ SE 60: Indirect common expenses
- ◆ SE 90: Expenses between companies

Use of the wording “direct” by WSC management with regard to these journal entries does not mean directly charged; instead its use generally refers to direct allocations, although in some cases an indirect allocation using a three-factor allocation is actually performed.

Operator and Regional Office Salaries and Benefits

This standard journal entry (SE 50) is applicable essentially to all non-Northbrook employees except regional offices and headquarters in Northbrook; those employees in Northbrook are included in SE 60 and those employees at regional offices are included in SE 90.⁶²

Because staff within a region, such as the Southeast Region, works for multiple companies and operations staff within South Carolina also often works for on a number of systems in more than one of the five South Carolina utilities, salaries and associated benefit expenses are allocated to each utility.⁶³ Generally regional and utility employees do not use time reporting for charging time to one of the South Carolina utilities.⁶⁴ Allocations are made based on the number of customer equivalents (as discussed in *Chapter II*) for each particular operator (employee) within one of the utilities or by regional office, as based on a quarterly analysis of how much each employee’s salary should be allocated to each company.⁶⁵

Regarding health costs and other benefit costs, the total costs are calculated for all WSC employees throughout the period and then these costs are divided by the number of full-time employees to give the base amount for each employee. The base amount given to each employee is then allocated to each subsidiary based on the same methodology as salaries, which is based on customer equivalents.⁶⁶

Pension and 401k contributions are tracked to each employee and also allocated out based on customer equivalents.⁶⁷

Direct Computer Expenses

Each of the accounts that are related to programming, maintaining, and servicing the computer system are assigned to each of the UI subsidiaries based on each company’s utilization. An analysis is performed each quarter to determine the number of accounts payable (A/P) invoices received and processed, as well as the number of customer bills sent for each of the respective companies. The total number of A/P invoices and customer bills are added together for each company and the corresponding proportion of the total is calculated. Accordingly, each company is directly assigned a proportion of costs that correlates to the company’s use of the system. Depreciation of computer assets is allocated using *Code 5*, as described later in this section.⁶⁸

Direct Insurance Expenses

According to WSC management, insurance, specifically the following types of insurance, is directly allocated to each company based on the determination of the premium for each company:⁶⁹



- ◆ Excess liability
- ◆ Worker's compensation
- ◆ Automobile
- ◆ General property
- ◆ Other (key person life, etc.)

Actually insurance is sometimes directly allocated and sometimes indirectly allocated, as shown on the following pages. The difference being that direct allocation typically refers to using a sole cost causative allocation factor and indirect allocation refers to using a general allocator comprised of multiple factors, as one factor cannot solely define cost causation. Excess liability insurance is an example where an indirect allocation factor is used.

The details on which individual premiums are based are verified annually by the outside insurance company; however, the specific amounts may not directly correspond to salaries listed in the quarterly allocation journal entry (or other WSC accounting schedules) due to timing differences. The basis by insurance type includes the following:⁷⁰

- ◆ *Excess liability* – It is an umbrella policy for general liability, automobile, and worker's compensation insurance. The premium allocation is based on three factors: miles of sewer mains (# sewer customers times average of 40 feet of main per customer divided by 5,280 feet), gallons of water sold (# of water customers times average of 200 gallons per day divided by 365 days per year), and operations payroll. WCS management believes that the use of this three-factor allocation is rational, because the number of customers drives many things, including the company's investment in plant and in vehicles, which in turn directly relates to the amount of insurance premiums that the company is charged. The company also uses operations payroll as its third factor, because the standard worker's compensation policy is allocated based on operations payroll.
- ◆ *Worker's compensation* – The premium allocation is based on each system's percentage of operations payroll to total operations payroll. WSC management believes that use of operations payroll is appropriate given that operators (employees in field) are covered under the worker's compensation policy.
- ◆ *Automobile* – The premium allocation is based on the specific number of vehicles insured according to the policy. WSC management believes that the use of number of vehicles is appropriate as the amount paid is directly related to the number of vehicles.
- ◆ *General property* – The premium allocation is based on the estimated property value of evaluated storage tanks, standpipes (if any), and an allocation of other plant items, including the regional office's property values and the Northbrook office property value. WSC management believes that it is appropriate, as these three factors drive the cost of general property insurance premium costs.
- ◆ *Other (key person life, etc.)* – The premium allocation for this variety of smaller policies is based on operations payroll.

Each type of insurance is weighted depending on the premium corresponding to that type of insurance.

Indirect Common Expenses

Salaries, benefits, and other expenses not assigned via SE 50, SE 51, and SE 52 are allocated via SE 60. Each of these accounts (as adjusted for reclassification of accounts) is allocated based on codes assigned to each account.⁷¹

Expenses between Companies

The UI subsidiaries also receive an allocation of costs that have been incurred at their regional cost centers and offices. (All cost centers are offices, but not all offices are cost centers. Cost centers receive costs that are not specific to one company.) South Carolina is one of six states that have regional cost centers and offices. The allocation of costs is made based on the number of customer equivalents for each operating company that receives service from each cost center or office.⁷²



Allocation Description of Codes Used by Account

In performing the allocation for each of these journal entries, 11 different codes specify the allocation factors used. *Exhibit III-6* and *Exhibit III-7* illustrate the allocation factors used by individual account.⁷³

Exhibit III-6
Summary Description of Codes Used by Account

Individual WSC Account	SE #	Code #
Operator's Salaries	50	
Regional Office Salaries	50	
Salary – Computer	52	4
Salary – IL Admin/Accounting	60	1
Salary – IL Customer Service	60	2
Agency Expense	60	1
Legal Fees	60	1
Audit Fees	60	1
Temp Employment	60	1
Outside Computer Consulting	51	
Employment Finders Fees	60	1
Computer Maintenance	51	
Director Fees	60	1
Computer Programming	51	
Engineering Fees	60	1
Accounting Studies	60	1
Tax Return Review	60	1
Computer Salaries	51	
Other Outside Salaries	60	1
Health Insurance Reimbursement	50; Northbrook Office 60	Northbrook 5
Employee Insurance Deductions	60	5
Health Costs & Other	60	5
Dental Insurance Reimbursements	60	5
Pension Contributions	Operators 50; Balance 60	6
Tuition	60	5
Deferred Compensation	60	1
Health Insurance Premiums	60	5
Dental Insurance Premiums	60	5
Term Life Insurance	Operators 50; Balance 60	5
401K Contributions	Operators 50; Balance 60	6
Disability Insurance	Operators 50; Balance 60	5
Other Employee Pension & Benefits	Operators 50; Balance 60	5
Other Insurance	52	
Publications, Subscriptions & Tapes	60	1
Answering Service	60	2
Computer Supplies	NA	
Printing & Blueprints	60	5

Exhibit III-7
Summary Description of Codes Used by Account

Individual WSC Account	SE #	Code #
Postage & Postage Meters – Office	NA	
UPS & Air Freight	NA	
XEROX	60	5
Office Supply Stores	60	5
Reimbursement/Office Employee Expense	60	5
Cleaning Supplies	60	5
Memberships	60	5
Microfilming	51	
Other Office Expense	60	5
Office Telephone	60	5
Office Telephone – Long Distance	60	5
Office Computer Phone List	51	
Office Computer Phone Line/Long Distance	51	
Office Electric	60	5
Office Gas	60	5
Other Office Utilities	60	5
Office Cleaning Service	60	5
Landscaping, Mowing Snow	60	5
Office Garbage Removal	60	5
Decorating & Repainting Structures	60	5
Repair Office Machines & Heating	60	5
Other Office Maintenance	60	5
Employee Educational Expenses	60	5
Office Education/Training Expense	60	5
Meals and Related Expenses	60	1
Bank Service Charges	60	1
Other Miscellaneous General	60	1
Depreciation Structure	60	5
Depreciation Office Furniture	60	5
Depreciation – Telephones	60	5
Depreciation – Computer	51	
Real Estate Tax	60	5
FICA Expense	Regional Offices 50; Northbrook 60	NB 5
SUTA	50	
SUTA – IL	60	5
FUTA	Regional Offices 50; Northbrook 60	NB 5
Interest Intercompany	Varies	
Interest During Construction	60	5
Miscellaneous Income	60	5
S/T Interest Expense	60	5

Each of the 11 codes (code corresponds to a particular method of allocation) used are described on the following pages as follows:⁷⁴



Code 1

The customer equivalent basis for allocating common expenses has been used for a number of years. Water Services Corporation provides service to about 250 small systems. The make-up of the customer base is fairly uniform throughout these systems, namely residential and small commercial customers, with the work force and work schedules geared to serving these small operations. The administrative staff, in turn, is also tailored to serving these small systems plus emerging new developments, thereby establishing a relationship between administrative and general expenses and customers used as the basis of allocations. Using customers as the basis of allocation also has the advantage of being readily available and being consistent from year to year.

Code 1 is based on customer equivalents. Customer equivalents are not number of customers, nor are they the number of billed customers. Customer equivalents are determined by the following table, as shown in *Exhibit III-8*.⁷⁵

Exhibit III-8
Customer Equivalents by Customer Type

	# of Customers	Factor	Customer Equivalents
Water Customer Only	1	1.00	1.00
Sewer Customer Only	1	1.00	1.00
Water & Sewer Customer (a)	1	1.50	1.50
Water Distribution Only	1	0.50	0.50
Sewer Collection Only	1	0.50	0.50
Availability (b)	1	0.25	0.25

(a) Many of the expenses incurred in servicing customer accounts are shared between water and sewer when a customer is supplied both services; therefore, use of a 1.5 customer equivalent recognizes that some expenses do not have to be fully duplicated. Customers that are both water and sewer together are not considered the customer equivalent of two customers, because these customers only require one premise, one address, one bill, etc. Also, it is not considered the same as having a water or sewer customer on their own, because WSC serves both water and sewer service issues. Therefore, WSC determined 1.5 to be a logical customer equivalent for a combined water and sewer customer.

(b) No availability customers are located in South Carolina.

The number of customers is the number of meters installed at 6/30 to provide the average number of customers during the year. An availability customer is one who has a main in front of his lot, but does not partake in any of the services.

Code 1 determines the percentage of customer equivalents in a given system compared to the total number of customer equivalents in Utilities, Inc.

Code 2 (not applicable to South Carolina utilities)

The company's general office and division office of the Illinois, Indiana, and Ohio operations is located at 2335 Sanders Road in Northbrook, Illinois. To gain operating efficiency, the clerical employees do

work involving all subsidiaries, as well as the Illinois-Indiana-Ohio division. The employees that are allocated based on *Code 2* work exclusively on the Illinois-Indiana-Ohio companies.

Similar to *Code 1*, *Code 2* is also based on customer equivalents. *Code 2* determines the percentage of customer equivalents compared to the total number of customer equivalents in Illinois, Indiana, and Ohio.

This Code allocates costs to only Illinois, Indiana, and Ohio companies.

Code 3 (not applicable to South Carolina utilities)

Some particular expenses apply only to Illinois companies. *Code 3* is also based on customer equivalents. *Code 3* determines the percentage of customer equivalents compared to the total number of customer equivalents in Illinois.

This Code allocates costs to only Illinois companies.

Code 4

Code 4 is the percentage of the number of bills sent to customers and invoices processed for each company compared to the total for all UI companies. *Code 4* is primarily used to distribute computer costs. This method of allocation is appropriate for computer costs because these costs are substantially driven by the amount of bills and computerized billing records that have to be calculated, recorded, and printed, as well as the number of invoices processed through the computer by A/P personnel.

Code 5

Code 5 is a weighted average of *Code 1*, *Code 2*, and *Code 4*. The weight of each code is based on the number of WSC employees whose salaries are allocated on each basis. This code is primarily used to distribute SE 60. *Code 5* is the most appropriate method of allocation because it considers how much time and effort employees in the Northbrook office dedicate to each system. Administrative and accounting personnel work on all systems, so the customer equivalent allocation (*Code 1*) is used for these employees. Customer service personnel in the Northbrook office are specific to Illinois, Indiana, and Ohio operations, so the companies that are provided these services out of the Northbrook office would receive an additional percentage allocation. Finally, computer services are included since all bill and invoice processing for all operating companies is done out of the Northbrook office.

Code 6

Code 6 is used to allocate pension and ESOP costs on SE 60, and is based on the percentage of SE 52 and SE 60 salary that has been allocated to each company. This is the most appropriate method of allocation, because pension costs are directly related to employee salaries.



Code 7

Code 7 is based on the estimated property value of elevated storage tanks and standpipes (if any) and an allocation of other plant items, including the regional offices' property values and the Northbrook office property value. *Code 7* is used to allocate the company's general property insurance premium. This is the proper basis for allocation, since these are the three factors that drive the cost of the company's general property insurance premium.

Code 8

Code 8 is the allocation of the premium for excess liability insurance and is based on three factors - sewer customers, water customers, and operations payroll. The book states that this premium is based on miles of sewer mains, gallons of water sold, and operations payroll. However, miles of sewer mains is determined by multiplying the number of sewer customers by an average of 40 feet of main per customer and dividing by 5,280 feet. Because this same multiplier is used for each sewer system, the real allocation factor is the number of sewer customers. Similarly, gallons of water sold is determined by multiplying the number of water customers by an average of 200 gallons per day and then by 365 days a year. Because this multiplier is used for each water system, the real allocation factor is the number of water customers.

It is rational to base excess liability insurance on the number of customers. The number of customers drives many things, including the company's investment in plant and in vehicles. In turn, the company's investment in plant and vehicles directly relates to the amount of insurance premium the company is charged. The company uses operations payroll as its third basis factor for excess liability because the standard worker's compensation policy is allocated based on operations payroll.

Code 9

Code 9 is the percentage of operator's salaries for one company compared to the total operator's salaries for all UI regulated companies. Worker's compensation premiums are driven by operator's salaries, thereby making this allocation method appropriate.

Code 10

Code 10 distributes the premium for auto insurance, which is based on the specific number of vehicles insured according to the policy. The amount paid for auto insurance is directly related to the number of vehicles, thereby making this method of allocation appropriate. The company does allocate vehicles in some areas due to the fact that they are shared between systems. The allocated vehicles are based on the customer equivalents for the systems that share vehicles only. For example, under the Florida column, if Lake Placid, UIF, and Bayside shared vehicles, then the allocation of those vehicles would be based on the customer equivalents for those systems only.

Code 11

Code 11 is the weighted average of *Codes 7 - 10*. Each code is weighted based on the level of insurance that each code applies

- ◆ *Code 7* applies to general property.
- ◆ *Code 8* applies to excess liability.
- ◆ *Code 9* applies to worker's compensation and other insurance.
- ◆ *Code 10* applies to auto insurance.

Other Accounting Processes in Support of Affiliate Transactions

Purchases and Invoices Processing

For individual entities within the UI organization, including the South Carolina utilities, purchases are coordinated at the branch level by area managers. A purchase order log is maintained for each system detailing purchases by month. Each system's area manager reviews the purchase order log for completeness, accuracy, and significant or unusual items. No matching process exists between what was ordered, received, and invoiced. For projects expected to have costs greater than \$5,000 an approved work order is required before purchases can be made. In these cases, the majority of costs are typically capitalized.⁷⁶ The primary affiliate transaction impacting South Carolina utilities are purchases of sludge hauling and disposal services from Bio Tech (a South Carolina corporation, which is also a wholly-owned UI subsidiary), although Bio Tech also performs construction/renovation/repair of facilities and buildings in South Carolina.⁷⁷

Invoices are typically received at each system's office, which for South Carolina utilities is in West Columbia (South Carolina). As they are received, account managers review the invoices for proper spending approvals and then code the invoice to a specific general ledger (G/L) account or work order number. Once any local approvals are made (if required) by area managers, the invoices are then forwarded to Northbrook for payment without any further review. All invoices are paid through the Northbrook office, regardless of where reviewing and coding takes place.⁷⁸

Operators and area managers have low approval limits, generally between \$100 and \$500, although no set approval limits exists for these titles. Other authorization levels exist for higher amounts, which until October 2006, were as follows:⁷⁹

- ◆ Regional Directors, up to \$25,000
- ◆ Regional Vice President, up to \$75,000
- ◆ Vice President of Operations, up to \$75,000
- ◆ Chief Executive Officer (CEO), over \$100,000



No explanation was provided by WSC management to Schumaker & Company consultants as to who can approve payments between \$75,000 and \$100,000;⁸⁰ however, in October 2006 new delegations of authority limits were implemented for the following items:⁸¹

1. Developer agreements
2. Work order requirements
3. Capital and expense spending, including consent order, permit, and development commitments, and capital and expense spending for IT hardware, software, equipment, etc.
4. Sale of assets
5. Personnel (hiring and offers)
6. Travel and entertainment expense reimbursement
7. Contracts

Exhibit III-9 illustrates the new capital and expense spending limits.⁸²

Exhibit III-9
Capital and Expense Spending Limits
(Including Consent Order, Permit, and Development Commitments)

Position Designated Authority	Limit
Directors/Managers	≤\$5,000
Regional Directors	≤\$50,000
UI Leadership Team, excluding Chief Operating Officer (COO) and CEO	≤\$100,000
Regional Vice President	≤\$250,000
COO	≤\$500,000
President/CEO	> \$500,000

IT Capital and Expense Spending Limits

Position Designated Authority	Limit
Directors/Managers	≤\$2,500
Regional Directors	≤\$2,500
Regional Vice President	≤\$7,500
UI Leadership Team	≤\$25,000
President/CEO	>\$25,000

Exceptions to the above approval thresholds include the following:

- ◆ Sludge hauling, chemicals and water/sewer testing expenses at any amount need only be approved by Regional Directors.
- ◆ Yearly insurance premiums are approved upon receipt; progress invoices applied against approved premiums need only Corporate Director approval.

- ◆ Invoices for legal expenditures are forwarded to the Northbrook office for executive approval and are coded by a Senior Accountant in Northbrook.

Bio Tech's sludge hauling services to South Carolina utilities fall into the exception category.⁸³

Every Wednesday, the Data Processing Coordinator runs a cash requirements report listing all A/P invoices and their due dates. The Director of Corporate Accounting receives this report, indicates a date to pay up through (typically 10 days out), and reviews the report for large dollar amounts and unusual vendors. A check run is initiated, typically on Thursdays, in which checks are run on pre-numbered check stock. A log of check numbers is maintained for control purposes. After processing, printed checks are given to the Data Entry Operator to run through the check signer. All checks between \$1,500 and \$5,000 must be additionally signed by the Senior Accountant within the Corporate Accounting group. Additionally, the Director of Corporate Accounting or the CFO must sign checks greater than \$5,000. If either the Senior Accountant or the Director of Corporate Accounting are absent during this procedures, either of them has the authority to review the other's set of invoices. Invoices are attached to these checks for support, which may be reviewed for proper approval and coding.⁸⁴

At the end of the month, the Senior Accountant emails the Regional Directors a list of processed invoices for their region for review.⁸⁵

Other Processes

Other accounting processes not previously discussed, such as payroll, customer accounts receivables, rates, meter reading, connects/reconnects, customer billing and payments, bank reconciliations, petty cash, debt administration, capital projects (work orders), and others do not appear to have a direct impact on affiliate relationships and associated transactions; therefore, these areas were not reviewed as part of this task area, although some may be included in other task areas.

Allocation of Rate Base Methodology

WSC, in addition to allocating costs, also allocates common rate base, which is primarily comprised of the Northbrook office building, furniture, and computers. This allocation is not recorded on each UI subsidiary's books, but is created for each utility's rate case filing as a special financial reporting process.⁸⁶



Findings & Conclusions

Finding III-4 Direct charging of employee time is not used to the extent appropriate.

Best practices with regard to assigning costs to UI subsidiaries would be to have costs/revenues directly charged whenever possible. The preferred hierarchy is:

1. Direct charging whenever possible
2. If not possible, then direct allocation should be used
3. Only in rare cases should indirect allocation, such as a general allocator, be used

However, direct billing is used on a limited basis within the UI organization. Direct billing is used within the UI organization for payment of accounts payable invoices where the specific SC utility can be identified. Employee time is directly charged only for rate cases and capital projects, based on manual reporting. Instead, initially allocations of time are calculated, using customer equivalents, which are based on a manual quarterly assessment of where WSC or utility employees spend their time. Then, any time designated for rate cases and capital projects reduces the allocations. (Allocating time costs first, then reducing allocations by direct charges is the reverse of what most utility organizations do. Generally, direct charges are made, and then allocations of remaining costs are done.) No employees use positive or negative time reporting for any other allocation purpose. Their ability to use such time reporting is currently limited by the old Accuterm system.⁸⁷

Finding III-5 The commercial customer data provided to South Carolina in the annual utility reports for the SC utilities do not agree with information provided during this project as part of RFP and/or rate filing documentation.

Exhibit III-10 shows discrepancies in data provided to Public Service Commission of South Carolina and the South Carolina Office of Regulatory staff in annual utility reports with that included in the RFP (for this project) and/or recent rate filings.

	Carolina Water Service, Inc.		Tega Cay Water Service, Inc		Utilities Services of South Carolina, Inc		Southland Utilities, Inc.		United Utility Companies, Inc	
	RFP/Rate	Annual Report	RFP/Rate	Annual Report	RFP/Rate	Annual Report	RFP/Rate	Annual Report	RFP/Rate	Annual Report
Water										
Residential	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Commercial	Y	N	Y	N	Y	N	Y	N	Y	N
Wastewater										
Residential	Y	Y	Y	Y	Y	Y	N	N	Y	Y
Commercial	Y	N	Y	N	Y	N	N	N	Y	N

Specifically the following is improperly occurring:

- ◆ All five SC utilities do not properly segment commercial customer data for water customers in their annual report.
- ◆ Four of the five utilities, specifically CWS, TCWS, USSC, and UUC, do not properly segment commercial customer data for wastewater customers in their annual report.



Exhibit III-11 illustrates the number of customers included in the RFP, which presumably came from UP's South Carolina utilities.⁸⁸ As shown, the RFP indicated that only CWS had commercial customers. Nevertheless, rate filings indicate that commercial customer water/water distribution rates exist for all five utilities and commercial customer sewer/sewer collection rates exist for four of the five utilities (CWS, TCWS, USSC, and UUC).

**Exhibit III-11
2004 RFP Customer Data**

	Carolina Water Service, Inc.	Tega Cay Water Service, Inc	Utilities Services of South Carolina, Inc	Southland Utilities, Inc.	United Utility Companies, Inc
	RFP	RFP	RFP	RFP	RFP
Water					
Residential	5,653	1,713	6,859	175	95
Commercial	170	0	0	0	0
Water Distribution	2,774	1,713	6,859	175	95
Wastewater					
Residential	9,729	1,689	467	0	1,779
Commercial	181 *	0	0	0	0

This includes one wholesale utility customer, Midlands Utility, for which wastewater collection services were provided to 2,213 of these customers.

Exhibit III-12 illustrates the number of customers provided to the Public Service Commission of South Carolina in each of the utility's 2005 annual report.

**Exhibit III-12
2005 Annual Report Data**

	Carolina Water Service, Inc.	Tega Cay Water Service, Inc	Utilities Services of South Carolina, Inc	Southland Utilities, Inc.	United Utility Companies, Inc
	Annual Report	Annual Report	Annual Report	Annual Report	Annual Report
Water					
Residential	6,200	1,723	6,794	174	96
Commercial	0	0	0	0	0
Wastewater					
Residential	10,288	1,701	360	0	1,797
Commercial	0	0	0	0	0

As shown, no commercial customer data (water and/or wastewater) was provided for the five SC utilities in their annual reports, even though the forms provide for this segmentation.

Finding III-6 The current process is not sufficiently automated to efficiently and effectively perform cost allocations.

The Accuterm system does not have an allocation module; therefore, information from this system must be loaded manually on a quarterly basis to Excel spreadsheets. These spreadsheets were initially created approximately 10 years ago and updated as necessary. Use of these spreadsheets is extremely complicated, requiring an experienced employee to fully understand. Performing allocations in this manner is time consuming and error-prone. It also limits WSC's ability to perform direct charging for employee time.

Finding III-7 Cost allocations rely too frequently on customer equivalents (or a general allocator using customer equivalents as one of the components) to charge SC utilities.

As shown previously in *Exhibit III-6* and *Exhibit III-7*, many general expense line items use *Code 1* or *Code 5* for allocation purposes. *Code 1* is based on customer equivalents. *Code 5* is a weighted average of *Code 1*, *Code 2*, and *Code 4*, where the weight of each code is based on the number of WSC employees whose salaries are allocated on each basis. Extensive use of customer equivalents may not be the best allocation factor for many of these line items, as there is not a cost causation link between the line item and customer equivalents. As indicated in *Finding III-6*, the current process is manually intensive; therefore, making extensive use of customer equivalents currently easier than if many different codes were used.

Finding III-8 No internal or external audits are regularly performed of UI's affiliate relationships and associated transactions.

The only audits of cost allocations prior to this management audit were financial audits conducted by external financial auditors or reviews conducted by South Carolina Office of Regulatory Staff (SCORS) as part of rate case filings. These activities are generally more like financial audits and are not operational or management oriented audits. No internal audits are performed, as UI has no internal audit function.

Finding III-9 Appropriate monitoring and controls do not currently exist for purchases and invoices from Bio Tech to ensure that South Carolina utilities are receiving the most cost effective sludge hauling/disposal services and construction/renovation/repair of facilities and buildings.

Currently Bio Tech primarily provides sludge hauling and disposal services, as well as construction/renovation/repair of facilities and buildings to South Carolina utilities, although sludge



hauling and disposal services comprise the majority of WSC's payments to Bio Tech.⁸⁹ Bio Tech management has plans to expand the services that Bio Tech provides.⁹⁰ Schumaker & Company consultants have several concerns regarding how the relationship between South Carolina utilities and Bio Tech is administered, including:

- ◆ No contractual agreement currently exists identifying the type of and description of affiliate transactions that Bio Tech provides.⁹¹ Therefore, the nature of affiliate services rendered are not clearly defined, the defined bases for associated charges are not clear, and there are no terms and conditions that identify that Bio Tech's services are favorable to regulated operations in South Carolina
- ◆ No market studies, including comparisons to outside vendors, have been performed in recent years to ensure that Bio Tech is the most effective means for South Carolina to receive the services that Bio Tech provides. This concern may get even larger as Bio Tech intends to expand its range of services in the future.
- ◆ Bio Tech charges the South Carolina utilities (and other UI utilities) the same rates (per mile rate and disposal charges) that it does for all of its customers. While Bio Tech also serves other public utilities and governmentally-owned utilities, such as municipalities, counties, special purpose districts and public service districts,⁹² its primary customers are UI utilities.⁹³
- ◆ Field management does not consider any other sources for the services that Bio Tech provides, and they have no idea of what the unit pricing arrangement is (if there is one). None of the field management had ever done any cost comparisons to determine Bio Tech's cost versus market price – they just used the sister company because it is an affiliate.⁹⁴ South Carolina management is involved in the decision-making process regarding services provided to them by Bio Tech
- ◆ Sludge hauling services are an exception from the normal authorization thresholds; they only need approval by someone at the Regional Director level, regardless of their size,⁹⁵ resulting in insufficient oversight, especially given the other concerns.

Given Schumaker & Company concerns, it is impossible to ensure that Bio Tech is not being cross-subsidized, as there are no mechanisms and procedures intended to guard against cross-subsidization of unregulated entities, either through intentional or unintentional means.

Finding III-10 Internal controls are limited for purchasing, invoicing, and payment activities.

Approval limits mentioned in the *Purchases and Invoices Processing* section of this chapter are reasonable for an organization the size of UI. However, it is conceivable that orders could be placed by area managers (and subsequently products or services received) that exceed his or her authority. It would not necessarily be known until an invoice is received. At that point, it is too late, as the company is likely obligated to pay. Also a matching process for what was ordered, received, and invoiced does not exist, which could result in payments for unauthorized items.

Also past South Carolina Office of Regulatory Staff (SCORS) audits have noted many coding problems involving South Carolina utilities.⁹⁶

Excluding Bio Tech's sludge hauling services from approval, just because it is an affiliate, is not appropriate. This practice could result in excess payments being made to Bio Tech.

Recommendations

Recommendation III-3 Emphasize increased use of time reporting for allocation purposes once the Accuterm system has been replaced. (Refer to Finding III-4)

Although only a portion of Northbrook, Charlotte, and Columbia employees could be directly charged, use of exception time reporting for those cases where a specific SC utility is being served would be an improvement to current practices of only using allocation by customer equivalents (except rate cases or capital projects reporting). Also general use of positive time reporting for field employees in South Carolina would be an improvement to current practices of generally using allocation by customer equivalents (except rate cases or capital projects reporting). Also Schumaker & Company recommends that, instead of performing allocation calculations and then reducing these allocated costs by direct charges to an utility organization, direct charges should be made first to an utility organization and then remaining costs should be allocated.

It is impossible at this time for Schumaker & Company consultants to determine if use of customer equivalents bears any resemblance to what is actually happening. Only with increased use of time reporting would better information be available. Once a decision has been made regarding how to replace the Accuterm system, WSC should perform a study and investigate what options exist for cost effective use of time reporting by employees. The study should be completed in 2007 (as WSC is implementing a new system) and results presented to ORS staff upon completion.

Recommendation III-4 Begin properly reporting customer data to the Public Service Commission of South Carolina and the South Carolina Office of Regulatory Staff in annual reports. (Refer to Finding III-5)

The Water Services Corporation should immediately investigate why discrepancies have occurred between what was included in the RFP and/or rate filings and what has been reported to the PSC of South Carolina and the South Carolina Office of Regulatory Staff in annual utility reports. Specifically, commercial water customers (all five utilities) and wastewater customers (all but Southland Utilities, which has no sewer service) are not specified in annual utility reports, and should be.

The company should work together with ORS staff to identify how far back revisions to annual reports may be necessary. All new annual reports should contain proper figures.



Recommendation III-5 Expedite implementation of a new accounting system to allow for increased automation of the allocation process. (Refer to Finding III-6)

The existing use of Excel spreadsheets is time consuming and error-prone. Given the capabilities of today's systems, WSC should be able to implement an improved methodology as part of its implementation of a new accounting system. Most current systems have an allocation module that can be used for directly taking data from the general ledger module and automatically allocating charges (not already directly charged) based on pre-defined rules. As soon as the new system has gone live, then WSC should begin implementation of an allocation process that takes advantage of the new system's capabilities.

Use of increased time reporting, as discussed in *Recommendation III-3*, should be incorporated as part of this process, to increase the use of direct charging to SC utilities.

Also increased use of additional allocation factors should be considered as the allocation module is implemented.

Recommendation III-6 Regularly perform audits of affiliate relationships and transactions, with the next one to be performed soon after the Accuterm system has been replaced. (Refer to Finding III-8)

The UI organization should have its auditors periodically perform audits of affiliate relationships and transactions to ensure that practices are actually following policies and procedures. As the company will be implementing a new system soon, the first audit should take place for the year in which the new system has gone live – and new policies and procedures created to take advantage of the new system's capabilities. Audits should occur at least every three years after completion of the first audit.

Recommendation III-7 Perform a market study to determine when, and if, Bio Tech should be used by South Carolina utilities for receiving the services that Bio Tech provides. (Refer to Finding III-9)

The Water Services Corporation should immediately perform a market study to address whether the Bio Tech affiliate is a cost effective choice for sludge hauling and disposal services, as well as construction, renovation, and repair of facilities and buildings in South Carolina. WSC's extensive use of Bio Tech as its preferred vendor for these services has not been cost justified. The study should compare Bio Tech's costs and benefits against those of other potential suppliers of these services. As Bio Tech's primary customer are UI utilities, it does not necessarily have to provide these services in a manner or for a reasonable cost that is favorable to SC customers. This study should be completed in 2007 and results presented to ORS staff upon completion.

Recommendation III-8 Modify internal controls. (Refer to Finding III-10)

Approval limits should be for purchase orders, not invoices, and include Bio Tech as part of this process. If the existing approval limits for Bio Tech do not make sense given the amounts, then new limits should be established for the services that it provides. These internal controls could, and should, be changed immediately.

A matching process may be difficult, given the Accuterm system's capabilities; however, when it is replaced, the Water Services Corporation should also revise its accounting practices to include a matching process for purchases, receiving tickets, and invoices.



C. Pricing Strategies

6. **Pricing Strategies:** Review the use of zonal rates for systems that interconnect with other government-owned systems or systems established pursuant to Section 33-36-10 of the SC Code of Laws versus statewide rates for systems where the company operates its own water supply or wastewater treatment facilities.

As shown previously in *Exhibit II-12*, most states within the UI organization have multiple companies, with potentially different rates. In South Carolina, only five different companies exist; however, in some states (Florida, North Carolina, and Illinois) WSC has many more companies. In our experience, many water companies have standardized on fewer legal entities per state, which results in considerably fewer rate cases for their regulatory/rate organizations.

WSC has various rates or tariffs for the five different legal entity utilities in South Carolina, as shown in *Exhibit III-13*.

Exhibit III-13
Utilities Inc. Operating South Carolina Utilities

	Water	Water Distribution	Sewer	Sewer Collection
Carolina Water Service	X	X	X	X
Southland Utility Company	X			
Tega Cay Water Service		X	X	
United Utility Companies	X		X	
Utilities Services of SC	X	X	X	X

Separate sewer rates exist for the Salem Church Peninsula and Road area pursuant to a contract with Richland County.

These utilities' rates are based on the type of service as follows:

- ◆ **Water** – Provides both the water supply and the distribution of that supply to the customer
- ◆ **Water Distribution** – Provides the distribution of the water from the source to the customer. In these cases the water is usually purchased from a third party such as a county water system.
- ◆ **Sewer** – Provides the collection and treatment of the sewerage from the customer to the treatment facility and discharge in accordance with various permits.
- ◆ **Sewer Collection** – Provides the collection of sewerage and delivers the sewerage to a third party (usual municipal or county treatment facility).

As shown in *Exhibit III-13*, not all of the utilities have rates for the different services.

The rates charged by the various utilities differ, as shown in *Exhibit III-14*, *Exhibit III-15*, *Exhibit III-16*, and *Exhibit III-17*, for water, water distribution, sewer, and sewer collection, respectively.

**Exhibit III-14
Water Comparisons
(Monthly Rate)**

	Carolina Water Service, Inc.	Southland Utility Company	United Utility Companies, Inc.	Utilities Services of SC, Inc.
Date of Schedule of Rates and Charges	March 1, 2007	March 18, 1991	May 12, 2004	January 19, 2006
Residential				
Base facilities charge per single family home, condominium, mobile home, or apartment unit	\$10.25	\$7.00	\$11.50	\$14.39
Residential commodity charge per 1,000 gallons or 134 CFT	\$3.32	\$2.60	\$4.50	\$3.91
Commercial				
Base facilities charge per SFE		\$7.00	\$11.50	
Base facilities charge by meter size:				
5/8"	\$10.25			
1.0"	\$25.62			\$35.98
1.5'	\$51.25			\$71.97
2.0'	\$82.00			\$115.15
3.0"	\$164.00			\$230.30
4.0"	\$256.25			\$359.84
Commercial commodity charge per 1,000 gallons or 134 CFT	\$3.32	\$2.60	\$4.50	\$3.91
Nonrecurring Charges:				
New water service connection per SFE	\$300.00	\$100.00	\$100.00	\$500.00
Plant impact fee per SFE	\$400.00	\$400.00	\$400.00	
New customer account charge	\$13.50	\$25.00	\$25.00	\$25.00
Reconnection charges	\$35.00	\$35.00	\$35.00	\$35.00



Exhibit III-15
Water Distribution Comparisons
(Monthly Rate)

	Carolina Water Service, Inc.	Tega Cay Water Service	Utilities Services of SC, Inc.
Date of Schedule of Rates and Charges	March 1, 2007	October 9, 2006	January 19, 2006
Residential			
Base facilities charge per single family home, condominium, mobile home, or apartment unit	\$10.25	\$7.56	\$14.39
Residential commodity (distribution) charge per 1,000 gallons or 134 CFT	\$1.90	\$1.69	\$2.24
Commercial			
Base facilities charge per SFE		\$7.56	
Base facilities charge by meter size:			
5/8"	\$10.25		
1.0"	\$25.62		\$35.98
1.5'	\$51.25		\$71.97
2.0'	\$82.00		\$115.15
3.0"	\$164.00		\$230.30
4.0"	\$256.25		\$359.84
Commercial commodity (distribution) charge per 1,000 gallons or 134 CFT	\$1.90	\$1.69	\$2.24
Nonrecurring Charges:			
New water service connection per SFE	\$300.00	\$600.00	\$500.00
Plant impact fee per SFE	\$400.00		
New customer account charge	\$13.50	\$30.00	\$25.00
Reconnection charges	\$35.00	\$40.00	\$35.00
Fire hydrant		\$100.00	

**Exhibit III-16
Sewer Comparisons
(Monthly Rate)**

	Carolina Water Service, Inc.	Tega Cay Water Service, Inc.	United Utility Companies, Inc.	Utilities Services of SC, Inc.
Date of Schedule of Rates and Charges	March 1, 2007	October 9, 2006	May 12, 2004	January 19, 2006
Residential				
Residential - charge per single family home, condominium, or apartment unit	\$38.14	\$33.02	\$48.24	\$41.39
Mobile homes - per unit	\$27.21		\$35.58	\$29.74
Commercial				
Base charge per SFE	\$38.14	\$33.02	\$48.24	\$41.39
Nonrecurring Charges:				
Sewer service connection (tap fees) per SFE	\$300.00	\$1,200.00	\$100.00	\$500.00
Plant impact fee per SFE (new connections only)	\$400.00		\$400.00	
Notification fee	\$4.00	\$15.00	\$4.00	\$6.00
New customer account charge	\$13.50	\$25.00	\$25.00	\$25.00
Reconnection charges	\$250.00	\$250.00	\$250.00	\$250.00
Reconnection charges (with elder valve)	\$35.00		\$35.00	\$35.00
Interceptor tank pumping charge	\$150.00			\$150.00



Exhibit III-17
Sewer Collection Comparisons
(Monthly Rate)

	Carolina Water Service, Inc.	United Utility Companies, Inc.	Utilities Services of SC, Inc.
Date of Schedule of Rates and Charges	March 1, 2007	May 12, 2004	January 19, 2006
Residential			
Residential - charge per single family home, condominium, or apartment unit	\$24.37	\$24.66	\$26.64
Commercial			
Base charge per SFE	\$24.37	\$24.66	\$26.64
Nonrecurring Charges:			
Sewer service connection (tap fees) per SFE	\$300.00	\$100.00	\$500.00
Plant impact fee per SFE (new connections only)	\$400.00	\$400.00	
Notification fee	\$4.00	\$4.00	\$6.00
New customer account charge	\$13.50	\$25.00	\$25.00
Reconnection charges	\$250.00	\$250.00	\$250.00
Reconnection charges (with elder valve)	\$35.00	\$35.00	\$35.00
Interceptor tank pumping charge	\$150.00		\$150.00

Findings & Conclusions

Finding III-11 **WSC maintenance of five separate utilities in South Carolina creates additional rate case processing costs and inconsistencies in charges to customers.**

Although WSC manages the five utilities in South Carolina as one entity, for regulatory purposes only it treats them as separate entities. This results in more rates cases than need to be handled by not only Water Services Corporation, but also the Public Service Commission of South Carolina. From a management perspective, WSC actually operates all of the separate utilities within South Carolina as if they were one utility. None of the separate utilities actually have any employees, but receive allocations from WSC based on primarily the number of customers (as discussed in this report).

Therefore the management cost for serving these customers would be the same for each utility. However, it is difficult to understand how certain nonrecurring charges, specifically reconnection fees, new customer account fees, and notification fees would be different for each utility, even though it is

the same entity providing that service. The only explanation for these differences is historical – i.e. the costs associated with filing multiple rate cases delay these differences from being corrected.

However, the capital (physical plant facilities) invested would vary by utility, which could account for some of the variation in rates. Water costs would vary based on the source of water. Sewerage treatment costs might vary between locations. Therefore, these differences would need to be recognized in the rate design resulting in different rates in some categories. It would not necessarily be possible to establish uniform rates in all categories; however, the need for multiple rate cases would save additional costs that would be incurred by the ratepayers and the Public Service Commission of South Carolina.

Recommendations

Recommendation III-9 Investigate the benefits of streamlining rate case processing by consolidating the companies for regulatory purposes into one entity, more in line with how the water utilities are currently managed. (Refer to Finding III-11)

From a regulatory standpoint, consolidation would be a significant change from the current regulatory arrangement; albeit more in line with how the water utilities are being managed. This is not a change that can be made by WSC alone but would require regulatory filings for approval of the consolidation. The overall objective would be to help minimize rate case costs both on the part of WSC and the affected governmental agency resources and address the differences identified in the above finding.



IV. Staff Functions

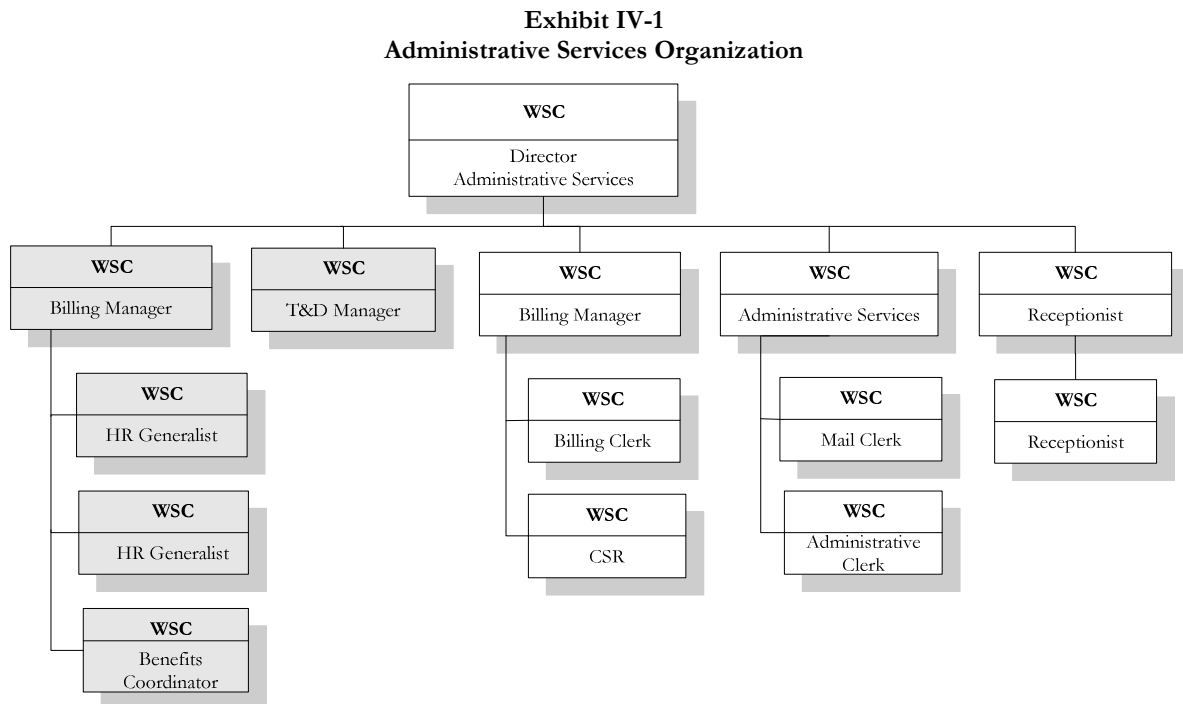
This chapter includes a review of the human resources function within the Water Services Corporation, Inc. (WSC) of Utilities, Inc. (UI), any pending litigation involving affiliated South Carolina companies that may impact WSC, and WSC technology tools and training policies and practices.

A. Human Resource Policies and Practices

7. **Human Resource Policies and Practices:** Review the extent to which managerial performance is vigorously assessed and corrective action is taken where warranted. Review adequacy and implementation of compensation plans and how they relate to industry standards. Review turnover rate per profession in comparison with industry standards. Describe any anomalies that may be found.

Background Information

Exhibit IV-1 illustrates the Administrative Services organization, which includes the HR and Training & Development (T&D) functions.⁹⁷



Human Resources

The Human Resources (HR) Department is composed of four full-time employees, as shown in *Exhibit IV-1*, with all having responsibilities relating to management of employee information.⁹⁸

Up to roughly three years ago, there was no central HR department at Water Services Corporation. Slowly, has been putting an HR function together at Northbrook and at local offices. In mid-2005, an HR Manager was named and the HR group acquired one HR Generalist and a Benefits Coordinator. In September 2006, another HR Generalist position was added to the function.⁹⁹

The primary operational activities that are performed by HR staff include the following:¹⁰⁰

- ◆ Recruiting and start-up
- ◆ Employee relations
- ◆ Benefits
- ◆ Employee review policies and procedures
- ◆ Disciplinary action assist and mentoring
- ◆ Incentive plans
- ◆ Turnover capture
- ◆ Diversity/EEO policies and procedures
- ◆ Compensation standards and job descriptions

Many of these activities are informal due to the fact that the HR organization is in its early stages. UI's work towards more organized plans, such as a recruiting and retention plan, is expected to begin as a human resources information system (HRIS) and an updated website become available.¹⁰¹

WSC currently uses ADP 5.1 for payroll and HR uses ReportSmith™ to download information from the payroll systems to spreadsheet format for review. WSC is currently in the process of investigating new computer software, which HR expects to include HRIS capabilities.¹⁰²

Although the HR Department has now been established with its own manager since mid-2005, it does not separately track its expenses; therefore, Schumaker & Company is unable to provide an indication of the level of HR operating expenses since then.¹⁰³

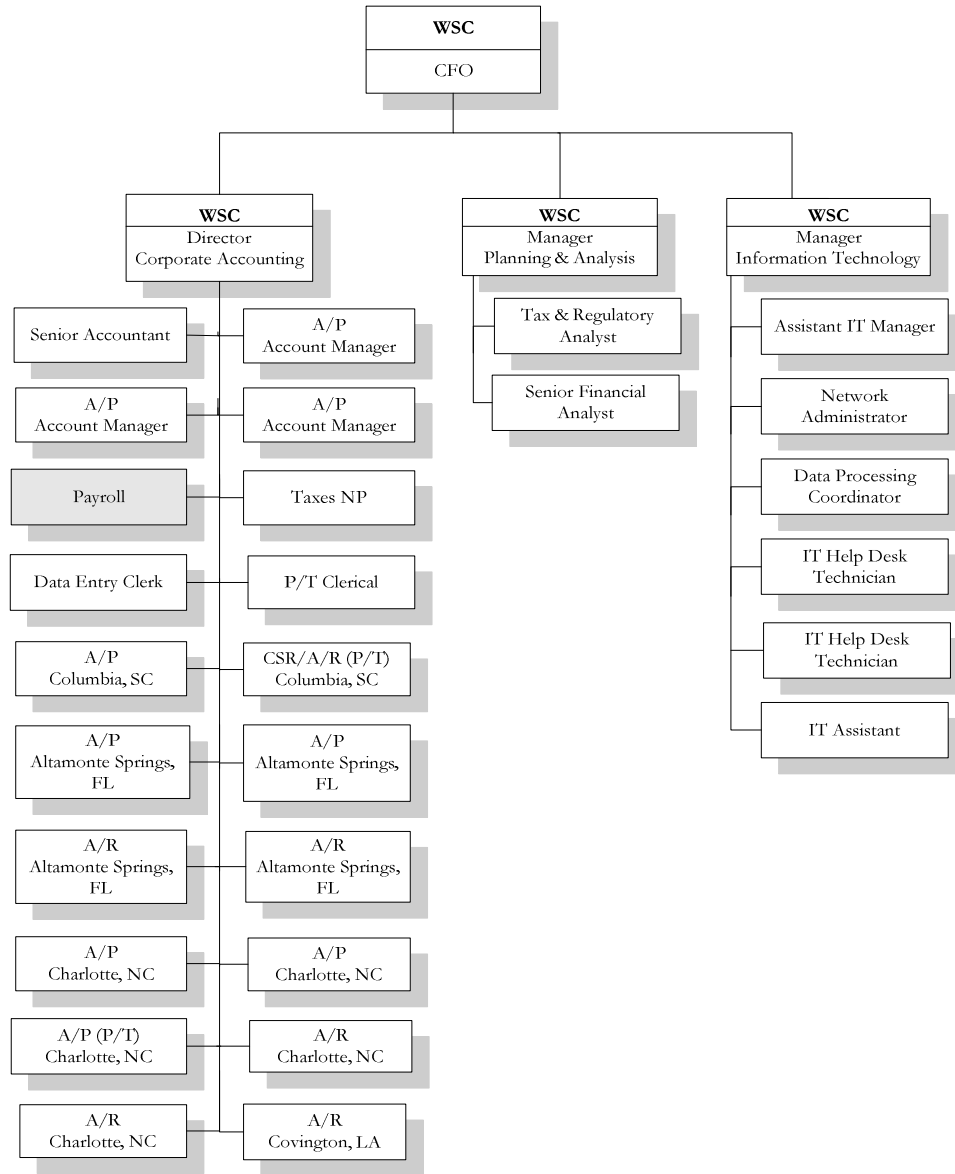
The primary way HR communicates with employees is by use of Microsoft Office tools, e-mail, and telephone,¹⁰⁴ although it obtains employee feedback through its employee hotline and direct correspondence with all staff levels throughout the year.¹⁰⁵

Payroll

Although HR staff initiates and retrieves payroll information from management and employees throughout WSC on an on-going basis, through new hires, reviews, and separations, it is not a primary function of the HR Department. Data gathered is transferred to Payroll staff, which is part of the

Corporate Accounting function reporting to the Chief Financial Officer (CFO), as shown in *Exhibit IV-2* on the following page, for filing and data entry. HR has no direct or in-direct reporting structure with the Payroll organization.¹⁰⁶

**Exhibit IV-2
Payroll Organization**



Training & Development

As of August 2006, one person provides training and development (T&D), although WSC does not consider it a part of the HR group. However, for the purposes of this audit, Schumaker & Company

considered it an HR function. Initial T&D activities will be “plan and do” activities for all general training requirements, excluding safety/compliance training, which will continue to be handled by field Operations staff.¹⁰⁷ Specifically, the T&D Manager will be responsible for improving the productivity of UI employees through the development, coordination, and presentation of T&D programs, including employee relations, new employee orientation, performance appraisal, and career development. Additionally the manager is response ongoing assessment of company-wide developmental needs to drive training initiatives and is expected to identify and arrange suitable training solutions for employees.¹⁰⁸

The T&D Manager may provide consultative assistance to IT staff and field trainers responsible for equipment and operational procedures; however, he is not directly responsible for these programs.¹⁰⁹

Billing

Customer billing activities are extremely manual with a very old billing system and many Excel spreadsheets and paper checklists. This group is looking at new customer billing software, which they are hoping will increase automation and reduce human involvement for selected activities, such as notices. Also included in this group is final bill creation, which is a totally manual effort.¹¹⁰

Administrative Services

The primary operational activities performed by Administrative Services staff include the following:¹¹¹

- ◆ Facilities (landscaping, etc.) for Northbrook office only
- ◆ Property and casualty insurance
- ◆ Fleet management (specifically ordering of new utility vehicles only) for local regions.
- ◆ Mail room (incoming mail, bill mailing, etc., plus backup for receptionists, etc.)

UI owns the Northbrook office building, but UI both owns and leases local offices. Due to crowded conditions at Northbrook, the Director of Administrative Services is responsible for looking for new office space in Northbrook area. The company hopes to move by the end of 2007. The Director does not know yet if UI will own or lease space, as it will depend on what is available. She is right now developing an RFP to give to developers.¹¹²

Receptionists

Two receptionists handle telephones and other projects from Northbrook groups based on their availability and management authorization.¹¹³

Goals & Objectives

The HR Department does not have an official mission statement; however, there are goals and objectives specified in the *Utilities, Inc. “What You Can Expect from Utilities, Inc.,” Employee Manual*, which incorporates the Human Resource Department responsibilities as:¹¹⁴

- ◆ Selecting people on the basis of skill, training, ability, behavior, and character without discrimination with regard to age, sex, color, race, creed, national origin, religious persuasion, marital status, political belief, or disability that does not prohibit performance of essential job functions.
- ◆ Paying all employees according to their effort and contribution to the success of the business.
- ◆ Reviewing wages, employee benefits, and working conditions constantly with the objective of providing maximum benefits that are consistent with sound business practices.
- ◆ Providing paid vacations and holidays to all eligible employees.
- ◆ Providing eligible employees with medical, disability, retirement, and other benefits.
- ◆ Developing competent people who understand and meet Utilities, Inc. objectives and who accept with open minds the ideas, suggestions, and constructive criticisms of fellow employees.
- ◆ Assuring that employees, after speaking with their managers, have an opportunity to discuss any problem with officers of Utilities, Inc.
- ◆ Respecting individual rights and treating all employees with courtesy and consideration.

And, in return, Utilities, Inc. specifies in the same employee manual that it expects “performance and good team behavior.” The manual also defines performance as being that the employee “knows their own duties and how to fulfill them promptly, correctly, and pleasantly.” The manual encourages employees to grasp opportunities for personal development as offered.¹¹⁵

Although no formal HR mission, goals, and objectives existed during Schumaker & Company’s audit field work, UI management indicated in early 2007 that it expects to define 2007 goals and objectives.¹¹⁶

Findings & Conclusions

Finding IV-1 Employee performance reviews are based on their own perspective with minimal input from management or peers.

WSC/UI operates a comprehensive performance management program scheduled every July first that applies to below executive level employees. HR initiates the process with a notice to supervisors in the April/May timeframe to send out the standard review *Utilities, Inc. Performance Evaluation Form* to their employees. The supervisors are provided with a deadline and a standard increase percentage available across the board (i.e., 3%). Employees then complete the form, providing accomplishments, goals for the



future, goals completed/not completed for the past year, and how they suggest improving their work environment. Supervisors may also fill out the form (or modify it) for each of their employees, but it is not mandatory. The employees do not complete the performance rating section; supervisors do. Evaluations are then scheduled between employee and supervisor. At the evaluation, supervisors are to complete the performance rating section and both participants are to sign and date the form.¹¹⁷ Subsequently HR reviews the performance reviews before they are filed.¹¹⁸

If an employee had exemplary performance and the supervisor wishes to provide them with a percentage increase higher than the standard percentage, they must get final approval from the Utilities, Inc. President. Normally, this is done with a bonus, rather than a higher percentage increase. Other exceptions might include promotions, which to align with others in that classification, a higher percentage is needed. When complete, all forms are sent to HR in Northbrook for personnel filing and payroll changes.¹¹⁹

Finding IV-2 Not all job descriptions and compensation ranges are standardized or documented.

Utilities, Inc. does not centrally maintain job descriptions for most of its employees, and some position descriptions are outdated or missing. HR is currently in the process of standardizing job descriptions and salary ranges. It is not yet complete and was not available for the purposes of this audit. Cost of living for local areas is being considered and included. No outside consulting has been requested or done in this area by the HR Department. No formal studies of job descriptions and compensation have been done. The HR Manager belongs to American Water Works Association (AWWA) and Marketing Research Association (MRA), where the HR Manager gets salary surveys, tools, and cost of living adjustment tools. Also used is the Society for Human Resource Management (SHRM) web site, although it does not have surveys.¹²⁰

Employees cannot perform effectively and efficiently if they are unaware of their specific job responsibilities. Unclear assignments involving duties and responsibilities result in un-accomplished tasks. Job function ambiguity could lead to effort duplication, no efforts at all, or haphazard efforts. A well-written job description distinguishes essential and non-essential job responsibilities and provides an overview of the work performed in a position. A job description also establishes information to use in determining salary and proper position titles and classifications, as well as positions' designations under the Fair Labor Standards Act (FLSA). Accurate job descriptions identify and delegate responsibilities within an organization and help ensure consistent job analysis and comparison for compensation purposes. The SHRM, a noted authority on HR practices, provides information and examples of job descriptions on its web site.

Employees can perform more effectively and efficiently if they properly understand their job responsibilities. A well-crafted job description also reduces a company's liability in the pre-employment selection process by focusing hiring representatives on legitimate and nondiscriminatory job-related requirements. The definition of essential and non-essential job functions in job descriptions is also

important under the Americans with Disabilities Act (ADA). The delineation of essential and marginal functions in job descriptions serves as an employer's "good faith" practice to promote equal access of employment opportunities to qualified individuals without regard to disabilities. The employer's distinction allows a disabled individual who is otherwise qualified for the position to determine whether the individual can perform all the essential job duties with or without reasonable accommodation by the employer. Well-written job descriptions clearly communicate performance standards and expectations to all employees and reduce confusion regarding responsibilities.

In simple and clear language featuring action verbs, job descriptions document major job duties and the following elements: a single job title that best depicts the complexity, specialization, or generalist nature of the job; department; title of the supervisor to whom the position reports; pay grade; FLSA status; explicit summary of the job description and measurable work outcomes; essential duties and responsibilities; supervisory responsibilities, if any; minimum qualifications; education and/or experience required; necessary language skills; mathematical skills needed; reasoning ability and physical demands. Some job descriptions also include preferred qualifications.

Many companies review and update job descriptions on a periodic basis to ensure work performance matches duties specified in the job description and that employees are evaluated and compensated fairly.

Finding IV-3 Utilities, Inc. does not have an effective way of communicating with personnel.

Utilities, Inc. has no effective communication tool that it uses to share information and keep employees abreast of pertinent information that may affect them or their work environment. The location of personnel, who are scattered among several buildings and several states, increases the difficulty of effective communication.¹²¹

UI relies primarily on the telephone, electronic mail, written memos, notes in employee paychecks, and sometimes word of mouth to communicate with employees. It also publishes a periodic newsletter that contains general information.¹²² Some employees do not sign onto their computer system regularly and some do not have computer workstations. Telephone communications often are ineffective, because messages are not always relayed promptly or accurately.¹²³ Although field staff had discussed the potential use of a "Blackberry" or similar device, their use had not yet been implemented in South Carolina during Schumaker & Company's field work.¹²⁴

If employees have expressed concern, they most likely do so through the employee hot line where issues and suggestions are encouraged. Questions or problems are directed to Northbrook HR and follow-up is done by an HR Generalist. These interactions can be anonymous.¹²⁵



Finding IV-4 The HR Department lacks a formal mission statement and associated departmental goals and objectives.

The HR Department does not currently have a formal mission statement. Mission statements generally improve employee productivity and assist departments in clearly defining job duties. The use of a mission statement and associated goals are important, as employers have found that a lack of clearly defined goals tends to frustrate and confuse employees. This, in turn, causes a decrease in motivation, productivity, and quality of work. Ultimately, this can result in a backlog of work, higher turnover rates, and added costs associated with hiring and training new employees. The established employee relations policy specified in the *Utilities, Inc. "What You Can Expect from Utilities, Inc.," Employee Manual* may be the only written statements reflecting Human Resource department goals (refer to *Goals and Objectives* stated earlier in this chapter).¹²⁶

Once an organization crafts a mission statement, the next step is to set goals and objectives. UI's HR Department has yet to establish a comprehensive set of written goals. Goals may have multiple objectives and are clear targets for specific actions. Objectives are more detailed than goals, have shorter time frames, and are measurable, quantifiable, and achievable. Strategies are the methods used to achieve goals and objectives. Sample metrics might include: total staffing levels, open requisitions, disability case management, hot line case management, and grievance activity levels where the outcome measures and output measures indicate the success of the strategies in achieving the objectives and goals.

Establishing regular goals and strategies are an important part of a good management process, regardless of whether or not they are used for budgeting, although tying the two together is preferable.

Finding IV-5 Executive compensation levels are not clearly defined or documented, nor are they based on formal comparative analysis.

At UI use of the terminology "executive compensation" refers only to the seven members of the UI leadership team, who are paid both salaries and incentives/bonuses. No salary ranges currently exist for these executive positions. At year-end the President and Chair determine salaries for executive employees, with input from the HR organization. The Board in turn determines the President's and Chair's salaries.¹²⁷ In 2006, salaries for these executives totaled approximately \$1,170,000.¹²⁸

Currently an executive's salary is only based on general goals, while incentives/bonuses are based on the company's and individual's performance with regard to favorably achieving revenue, operating expense, and capital expenditure budget figures. During a year, executive employees do not know how much will be paid in incentives/bonuses based on specific goals and objectives. They only know their maximum for incentives/bonuses. For 2006 this maximum was 25% of their respective salaries, or approximately \$292,500. It is at the Board's discretion how much, if any, of incentives/bonuses are paid each year. For 2006, the Board decided in early March 2007 that all seven executives would receive their maximum incentive/bonus¹²⁹

Although (without performing a formal compensation study) salaries appear reasonable given that executives work in Northbrook (IL) near Chicago, to Schumaker & Company's knowledge, no formal comparative studies are performed to determine salary or incentive ranges.

Finding IV-6 South Carolina turnover rates appear reasonable.

Exhibit IV-3 illustrates turnover rates for 2004, 2005, and 2006 (through June 2006) for South Carolina full-time operations and office employees.¹³⁰

Employee Type	2004	2005	2006
Full-time Operations	3%	7%	5%
Full-time Office Employees	20%	18%	10%
Total	7%	9%	6%

2006 data reflects January 1- September 30 only

These turnover rates appear reasonable based on benchmarking these figures against SC comparators, using Bureau of Labor Statistics (BLS) (www.bls.gov) and Nobscot Corporation (www.nobscot.com) data. The figures for SC, for example, are just below the BLS average for overall water utilities.

Recommendations

Recommendation IV-1 Require mandatory management reviews of employee performance and adapt a more 360°-like review process across all employees. (Refer to Finding IV-1)

The evaluation process should allow continuous communication of expectations and actual performance between employees and their supervisors. For employees to be the sole source of their own behaviors and skills, growth is limited. Mandatory management written reviews are recommended, using the same *Utilities, Inc. Performance Evaluation Form*, with slight modifications for perspective, as those given to the employee. Both employee and supervisor should complete the performance rating section of the form prior to the evaluation meeting to initiate discussion for those areas where there is any discrepancy. Use of similar forms helps with comparability. At the evaluation, employee and supervisor would then jointly agree on performance ratings to be reported and develop individual performance plans that focus on technical, behavioral, and operational competence. Job duties should be measurable, so that a performance level can be determined. As job duties change, the expectations for the employee should change accordingly. The evaluations should provide justification for any salary change or disciplinary



action. In addition, the completed, signed, and dated evaluation should be forwarded to the designated Human Resources representative and the employee should get a copy.

Employees and supervisors should then meet again after six months to monitor progress where employees can be rated “on track” or “off track” with respect to their performance against their annual goals and competencies.

If possible, peer(s) should also be given the opportunity to review an individual anonymously (best accomplished through electronic submission) by completing the performance rating section as seen on the *Utilities, Inc. Performance Evaluation Form* and providing it to the supervisor of the employee being reviewed prior to the scheduled evaluation meeting. Again, use of similar forms helps with comparability.

When a supervisor’s performance review is initiated, subordinates and peers should be provided with the means for anonymous contributions by completing the *Utilities, Inc. Performance Evaluation Form* through the performance rating section only. This 360° perspective on the individual’s performance will provide a more complete picture of how well an individual performs in their assigned position and whether or not adjustments to responsibilities or training should be recommended.

Recommendation IV-2 Complete the process to develop accurate and standardized job descriptions and salary ranges for all positions. (Refer to Finding IV-2)

Concisely written and accurate job descriptions provide essential information to validate selection criteria for jobs and allow a company to maximize its use of human capital by avoiding organizational redundancies. Well-written job descriptions clearly communicate performance standards and expectations for all employees and designate specific points of responsibility company-wide.

HR should consider appointing a job analysis committee to coordinate the development of job descriptions for all positions. Employees should submit a detailed list of duties they perform and supervisors should amend duties to fit state or local needs and submit the list to the committee. The committee should then forward descriptions, with appropriate recommended changes (if any), to the HR Manager for review and subsequently completion.

HR should then establish a policy stating that each department will be responsible for reviewing and updating job descriptions on a three-year cycle, with one third of the job descriptions reviewed each year.

Recommendation IV-3 Develop a plan to ensure that all employees receive vital personnel information in a timely and consistent manner. (Refer to Finding IV-3)

Utilities, Inc. should consider adding a web-based news center, including use of electronic mail regularly, or in selected cases distributing written information that must be signed for by employees, to more effectively disburse information.

A first step could be to create an employee news center online. The online (web-based) news center could be sanctioned by Utilities, Inc. for all locations and used to communicate business-related information, such as information about business changes, improvements, benefits, and other issues. Utilities, Inc. already has an operational Web site at <http://www.utilitiesinc-usa.com>, so the news center could be just a link off the home page. Especially as this service is initiated, department heads should make sure that employees are aware immediately of important information being disseminated via the online news center.

Then steps could be taken to inform department heads and staff of deadlines for submitting articles to the online news center (or HR first for approval) and encourage them to use it to communicate with staff.

Recommendation IV-4 Establish a mission statement and associated goals and objectives for Human Resources. (Refer to Finding IV-4)

Implementing this recommendation will result in a succinct mission statement along with goals and objectives that will help the department operate in a more focused effort. Although organizations implement goals and objectives in different ways, most have common elements. First there must be commitment to the strategic planning process, begin doing it, develop and refine, identify future challenges and opportunities, identify the company's strengths and weakness, develop concrete strategies to achieve the mission, and develop a plan for evaluation.

The HR Department should develop a mission statement that accurately describes its main functions and reasons for existence. The approved mission statement should be posted throughout the HR office and each WSC location. In this way, HR staff will be constantly reminded of the importance of their individual work and how it contributes to the department's mission and all employees will understand the HR function.

The HR Manager should develop a list of overall departmental goals that encompass the department's core functions. As an example, one departmental goal could be "Hire qualified employees in a timely manner." Once the departmental goal is established, potential objectives might include:

- ◆ Post and advertise all job openings within 24 hours of final approval
- ◆ Enter all applicant information into the personnel system shortly after the posting is closed



- ◆ Schedule all applicant interviews within two days of receiving a department's choices of interviewees

The goals/objectives and associated results should be included in a monthly report to the HR Manager. All HR staff should be aware of the results. This system will keep them apprised of the department's aim and success at achieving them.

Because department functions may not radically change each year, the goals will not likely change much from year to year. The objectives, however, may change as they are tracked. The HR Manager could discover that some objectives do not contribute much to the measurement of the department's success, or that a particular function; one not listed as an objective, is taking an increased amount of employees' time and should be included as an objective. For these reasons, the department should schedule an annual review of the appropriateness of the objectives and perhaps less often a review of the goals.

Recommendation IV-5 Formalize executive compensation procedures and regularly perform studies to identify appropriate executive pay levels. (Refer to Finding IV-5)

More formalization, including defined salary ranges and incentive/bonus plans, should be developed in 2007 so that executives know (by mid-year) what compensation to expect given their performance. Formal performance reviews should be conducted for executive employees to give feedback as to their performance. Individual incentive/bonus plans should be developed that incorporate specific goals that an executive is targeted to achieve. In subsequent years, these plans should be set before the year begins.

Additionally, the pay ranges (salaries and incentives/bonuses) for executives should be based on formal comparative analysis to ensure that ratepayers are not being impacted on pay levels that are too high.

B. Pending Litigation

8. ***Pending Litigation.*** Review any pending litigation from affiliated South Carolina companies that may impact Water Services Corporation. Contractor will agree and covenant not to disclose in its audit any confidential information related to pending litigation and will agree to use information it learns about pending litigation for no other purposes than for this.

Findings & Conclusions

Finding IV-7 **At this time, there is no pending litigation from affiliate South Carolina companies that may impact Water Services Corporation.**

Currently, WSC has 13 rate cases pending in Florida, one rate case pending in Nevada, one rate case pending in North Carolina, one rate case pending in Indiana, and one rate case pending in Virginia.

Recommendations

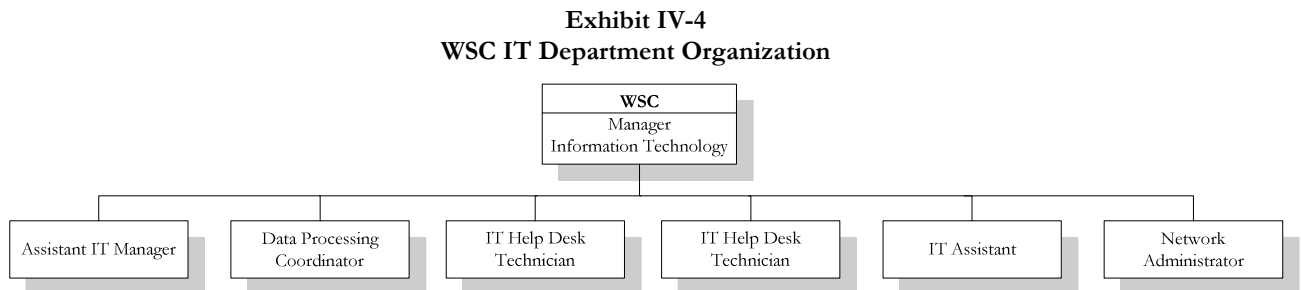
None

C. Technology Tools and Training

9. **Technology Tools and Training:** Review the company's use of technology to further its business objectives. Review training policies and practices to determine whether adequate training is provided to all employees.
-

Background Information

The information technology systems at Water Services Corporation, Inc. are maintained by a seven-person department, which is organized as shown in *Exhibit IV-4*.¹³¹



The department is responsible for:

- ◆ Installation and maintenance of the hardware and software used for WSC's Customer Information and Billing System
- ◆ WSC's basic accounting systems (GL and AP systems)

- ◆ The underlying network infrastructure (servers, workstations, routers, and network transport) that consists of a recently implemented migration to a Microsoft Windows 2003 network.¹³²

There are currently approximately 250 -300 users of the computer network. With approximately 40 of these users located in Northbrook, the majority of the users are located at the remote locations. The department is currently in the process of transitioning from Apple servers located in the various remote locations to a completely Windows 2003 network.¹³³

Currently, the remote sites are connected via dedicated 56k lines. These lines are currently being used for the support of the customer information and billing system, the transmission of meter reading information, and also carry voice traffic. The department is beginning to look at dedicated T-1 facilities between locations.¹³⁴

Billing System

The billing system is an older character-based system that has been used within WSC for many years (predating many of the current staff). It is more or less a custom application that was written for WSC many years ago – perhaps 20 years ago.

Accounting System

The accounting system is of a similar age as the billing system. The accounting system is only used for maintaining the accounting records with little additional capability such as forecasting and budgeting, inventory control, purchasing and materials management, etc. and other items that are characteristics of today's enterprise resource planning (ERP) systems.¹³⁵

In the case of both the billing system and the accounting system, the underlying technologies are so old that it is difficult to get outside support for these systems at this time. However, some WSC personnel are capable of supporting these older systems.

Windows 2003 Network

WSC has recently begun migrating to a Windows 2003 network infrastructure. Prior to last year, WSC had a combination of Macintosh workstations and Apple servers at some locations and some Windows based personal computers. Although this configuration had been made to work, it was a heterogeneous environment that is a more difficult environment to support and more difficult for interfacing with outside organizations – i.e., state regulatory commissions. The implementation of this new Windows 2003 network is just beginning. Two Windows 2003 servers have been implemented with 5-6 more eventually being placed at the remote locations.

Findings & Conclusions

Finding IV-8 **WSC's information systems are outdated and in need of significant upgrade.**

As discussed above, the current billing and accounting systems are older technologies that do not provide the features available in current commercially off-the-shelf (COTS) software packages. In addition, ongoing support of these older systems is questionable, at best. The current billing and accounting systems are in the process of being replaced with a COTS packages. WSC has engaged Deloitte & Touche to guide WSC through this review, selection, and implementation process. WSC anticipates a two-year implementation process.¹³⁶

Finding IV-9 **There is little indication of much of an information technology planning process.**

Progressive organizations - "best in class" - rely on information technology as a key asset for "competing" in today's environment. With Utilities, Inc. presenting itself as the largest water utility holding company in the United States, it would be expected that they would strive to be in a "best in class" company.

There is no existing IT Department mission statement. The IT Department functions primarily as a support group for all computer-related needs of Utilities, Inc. It appears to be doing this support without a clear plan of the direction that information technology is headed within Utilities, Inc.¹³⁷

A budget does not exist for IT operating expenses and capital expenditures. The same level of oversight that is given other portions of the capital program is not performed regarding IT expenditures.

Not only is there no overall information technology plan, but there is little existing documentation or diagrams available of the current network infrastructure. No written plan for the implementation of Windows 2003.¹³⁸

Finding IV-10 **There is insufficient emphasis on training and certification within the IT Department.**

Although the IT Department has taken some training in relevant technologies, its staff has no requirement or even incentives for obtaining certifications. There are currently seven individuals in the IT Department to support a 250 workstation network with a couple of servers. With proper training and certifications, we are aware of other organizations that support much larger networks (800-1,000 workstations) with fewer or the same number of staff.¹³⁹



Finding IV-11 **Several of WSC's current applications may need to be rewritten with the migration to a Windows 2003 network.**

The adoption of the newer billing and accounting packages will permit WSC to consolidate some of its technology systems. In some cases, some of the smaller applications written and supported within the IT Department will be replaced by this new system. However, server systems might need to be migrated to different technology; including:

- ◆ Capital Projects Database
- ◆ Incident Database
- ◆ Issues Database

Recommendations

Recommendation IV-6 **Develop a written network infrastructure plan consistent with the needs of the new billing and accounting systems and network users needs. (Refer to Finding IV-8, Finding IV-9, and Finding IV-11)**

One would hardly begin to build a building without construction drawings and yet many IT organizations begin building networks without developing a complete set of drawings. A written IT plan needs to be developed in advance of actual implementation. The IT plan should address the following items:

- ◆ ***Information Technology Department Organization and Management*** – Overall presentation of the management and organization of information technology activities, which would include organization structure, staffing levels and skills, IT business processes, and management systems.
- ◆ ***Information Technology Systems*** – Description of current and project future information technology systems in place, which would include enterprise resources planning (ERP) systems, fleet management systems, materials management systems, GIS systems, document imaging and processing systems, workflow systems, email systems, internet, website and access, mobile technologies, and any other systems that are anticipated to be used in WSC's day-to-day business. It would also include a review of the software acquisition and/or development processes and ongoing support provided within the organization.
- ◆ ***Network Infrastructure*** – Description of current and future hardware and software, including speed, capacity, and potential for future growth including:
 - a. Physical network diagram
 - b. Servers – configuration, age, performance, software configurations
 - c. Workstations – configuration, age, performance, software configurations
 - d. Routers
 - e. Printers

- f. Cabling
 - g. Security
 - h. Capacity and speed
 - i. Telephone and cellular services
 - j. Voicemail/unified messaging
 - k. Mobile services
 - l. Multimedia services
- ◆ **Systems Security and Reliability** – A review and assessment of physical security, logical security, fault tolerance, disaster recovery, and computer room layout, including:
 - Physical security arrangement
 - Network security (security configurations), including Active Directory, organizational units, virus scanning, spam control, and spy ware mitigation technologies
 - Firewalls
 - Fault tolerance
 - Backup processes
 - Disaster recovery
 - ◆ **User Support** – Plans for hardware/software maintenance and repair, help desk functions, patch updates, software upgrades, and other ongoing activities need to be reviewed.

Recommendation IV-7 Place greater emphasis on ongoing training and certification in the IT Department. (Refer to Finding IV-10)

IT personnel should be provided incentives to obtain certifications. These incentives should “pay for themselves” as the IT Department becomes capable of providing most of the IT support required from internal resources versus having to use outside consultants. Outside consultants should only be used to providing specialized skills or for augmenting internal resources.

¹ / Interview 4

² / Interview 4

³ / Press Release on Sale

⁴ / Interview 4

⁵ / Interview 4

⁶ / Interview 8

⁷ / Interview 4

⁸ / Interview 8

⁹ / Interview 4 and Information Request 51 and 52

¹⁰ / Interview 4

¹¹ / Interview 8

¹² / Interview 8

¹³ / Interview 4



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- 14 / Interview 4
 - 15 / Interview 4
 - 16 / Interview 8
 - 17 / Interview 8
 - 18 / Interview 8
 - 19 / Interview 8
 - 20 / Interview 8
 - 21 / Information Response 19
 - 22 / RFP
 - 23 / RFP
 - 24 / RFP
 - 25 / RFP
 - 26 / RFP
 - 27 / RFP
 - 28 / Information Response 1
 - 29 / Interview 2 and Information Response 2
 - 30 / Various interviews
 - 31 / Information Response 3
 - 32 / Information Response 3
 - 33 / Information Response 3
 - 34 / Information Response 3
 - 35 / Information Response 3
 - 36 / Information Response 3
 - 37 / Interview 2
 - 38 / Information Response 28
 - 39 / Information Response 68
 - 40 / Interview 2
 - 41 / Interview 2
 - 42 / Information Response 2
 - 43 / Interview 2
 - 44 / March 20, 2007 Company Comments
 - 45 / Information Response 28 and March 20, 2007 Company Comments
 - 46 / Information Response 28, OQ Response II-7, and March 20, 2007 Company Comments
 - 47 / Interview 6
 - 48 / Interview 6
 - 49 / Interview 6
 - 50 / Interview 6
 - 51 / Interview 6
 - 52 / Interview 6
 - 53 / Information Response 1 and Interviews 2 and 9
 - 54 / Information Response 3
 - 55 / Interview 2
 - 56 / Interview 2 and Information Response 24
 - 57 / OQ Response III-1
 - 58 / Information Response 24
 - 59 / Interview 2
 - 60 / Interviews 2 and 9 and Information Responses 24 and 29
 - 61 / Interviews 2 and 9 Information Responses 24, 29, and 55
 - 62 / Interview 2

63 / Interviews 2 and 9 and Information Response 24
64 / Interview 2
65 / Information Response 24
66 / Information Response 24
67 / Information Response 24
68 / Information Response 24
69 / Information Response 24
70 / Information Response 24
71 / Information Response 24
72 / Information Response 24 and OQ Response III-3
73 / Information Response 24
74 / Information Response 24
75 / March 20, 2007 Company Comments
76 / Interview 9 and Information Response 27
77 / Interviews 2 and 9 and Direct Testimony of Steen M. Lubertozzi in Docket No. 2006-92-WS
78 / Interview 9 and Information Response 27
79 / Information Response 27
80 / OQ Response III-4
81 / March 20, 2007 Company Comments
82 / March 20, 2007 Company Comments
83 / Various field interviews
84 / Interview 9 and Information Response 27
85 / Information Response 27
86 / Information Response 27
87 / Interviews 2 and 9 and March 20, 2007 Company Comments
88 / March 31, 2007 ORS Comments
89 / Interview 13 and Direct Testimony of Steven M. Lubertozzi in Docket No. 2006-92-WS
90 / Interview 13
91 / Information Response 58
92 / Interviews 2 and 13 and Direct Testimony of Steen M. Lubertozzi in Docket No. 2006-92-WS
93 / Interview 13
94 / Various field interviews
95 / Information Response 27
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Schumaker & Company



**Management and Operations Audit
of
Twin Lakes Utilities**

Final Report

August 2012

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 Recommendation III-3 Formalize the role of the UI and Twin Lakes boards once the Corix acquisition of Utilities, Inc. has been completed. (Refer to Finding III-5)59

 Recommendation III-4 Develop a code of ethics, train all employees, including Twin Lakes employees, on its content, and require them to annually acknowledge and accept its requirements. (Refer to Finding III-6)59

 Recommendation III-5 Implement formal disaster recovery and business continuity plans. (Refer to Finding III-7)60

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Recommendation IV-1	Perform a detailed analysis to verify that the use of the number of equivalent residential connections for allocating costs among regulated utilities reasonably approximates the use of cost-causative factors; subsequently make modifications, as appropriate, if significant variances are noted and a change in procedures can be economically justified. (Refer to Finding IV-1)85
Recommendation IV-2	Emphasize increased use of time reporting for direct charging of time and associated costs. (Refer to Finding IV-1).....85
Recommendation IV-3	Regularly perform audits of affiliate relationships and transactions. (Refer to Finding IV-2)85

I. Executive Summary

Today, new challenges are making water and wastewater operations a dynamic and rapidly changing environment, requiring increased interaction between the functional areas, new technologies, expanded capabilities from staff personnel, and for some utilities, re-evaluation of utility philosophies. Utilities have had to enhance staff skills. New regulations, such as those pertaining to the disposal of sludge and the protection of aquatic wildlife, have also had important implications on utility operations. In addition, many utilities have had to deal with the possibility that their current raw water sources may be inadequate over the long-term. Demand management, conservation, and other non-conventional solutions have become important elements in long-term planning. The implications on water/wastewater rates have resulted in greater interaction between the engineering design, finance and rates, and customer relations departments of many utilities throughout the long-term planning process.

The Indiana Utility Regulatory Commission (IURC) identified the need to have a consultant conduct a management and operations audit of Twin Lakes Utilities, Inc. (TLUI or Twin Lakes). The bottom line of this project was to determine whether there are efficiency measures that could be passed on to Twin Lakes ratepayers through the implementation of greater efficiencies in organizations, operations, or both. Additionally, included in the project was the determination of whether the ratepayers are being properly and economically served by the range of corporate services that are provided to WSC operations in Indiana by the management and staff located in Charlotte (NC) and Northbrook (IL).

Schumaker & Company has many years of experience performing management audits of electric, gas, water/wastewater, and telephone utilities across the United States and Canada. Through the performance of these management audits, we have developed specific business processes and work plans for performing such reviews that were brought to our performance of this review. In addition, because this review was being conducted in Indiana, Schumaker & Company consultants have also incorporated the Indiana Department of Environmental Management (IDEM), Office of Water *Quality Information Handbook for Preparing a Water System Management Plan* (IDEM Handbook) as a part of our review process. We have organized the reporting of our results of this review along the following areas:

- ◆ Water/wastewater operations (Management and Technical in IDEM Handbook terms)
- ◆ Customer service and key support units (executive, technology services, human resources and payroll, legal/risk management/administration) (Management and Technical areas in IDEM Handbook terms)
- ◆ Financial management and structure (Financial in the IDEM Handbook terms)



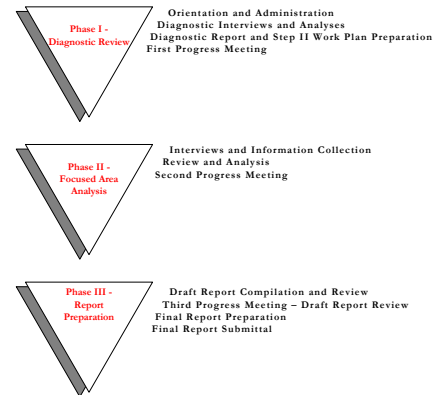
A. Scope of Work

Synopsis of Study

We conducted this management and operations audit based on a three-phase review process. These three phases, and their components, are schematically summarized at right. This process provided Schumaker & Company consultants with a structured approach that is comprehensive and logical, as well as interactive with UI/WSC and Twin Lakes employees. We have refined this three-phase process over many reviews, audits, and studies conducted with the same team members proposed for this project.

The following text presents a concise summary of the results of our investigations into the following work tasks that were specified in our proposal response:

- ◆ Water/wastewater operations
- ◆ Customer service and key support units (executive, technology services, human resources and payroll, legal/risk management/administration)
- ◆ Financial management and structure



We have organized our findings and recommendations to be consistent with these specific work tasks.

B. Overall Summary

By its very nature, a management and operations audit is a critical assessment of the management and operations of an organization. This audit was performed for ultimate benefit of the ratepayers of Twin Lakes in Indiana. The overall objective of the UI subsidiaries is, simply, the safe, reliable long-term provision of water and wastewater services at just and reasonable costs. Continued success in achieving this objective is directly related to the management efforts and effectiveness of UI subsidiaries. Our role was to determine how this objective is being met and to identify improvements that the UI subsidiaries can make to enhance the attainment of this objective. In the interest of efficiency, our review focuses on areas that could be improved and not on areas we found optimum or exceptional performance. ***The lack of various “pats on the back” for good performance should not be construed negatively in anyway.***

Because the bulk of any management and operations audit is devoted to opportunities for improvement, this report may give the reader the impression that Utilities, Inc. (UI) is seriously deficient. This is not the case. Utilities, Inc. has generally done a good job of providing water and wastewater services to its customers. Water Service Corporation (WSC) employees are dedicated and take pride in their responsibilities for providing water and wastewater services in Indiana.

In that Schumaker & Company had previously reviewed Carolina Water Service, Inc.; Tega Cay Water Service, Inc.; Utilities Services of South Carolina, Inc.; Southland Utilities, Inc.; and United Utility Companies, Inc. (all of which are Utilities, Inc. operating water and/or wastewater utilities in South Carolina) for the South Carolina Office of Regulatory Staff (ORS) in the 2006 to 2007 timeframe, we were also in a position to identify changes that had taken place since that review and timeframe. In particular, the following significant changes have been noted in our report:

- ◆ The adoption of a performance management system, which could also be considered the basis for a corporate strategic plan, has occurred. The current performance management system allows linkages to company, regional/departmental, and individual goals. An annual review rubik is provided to managers and supervisors to help them in conducting performance appraisals as a means to promote standardization and consistency across the organization.
- ◆ Financial processes and systems have improved significantly since we last reviewed these activities in 2007. At that time, many financial functions were being performed in the field without centralized controls at WSC in Northbrook, and the systems in place were home-grown applications that had minimal capability to efficiently and effectively perform necessary tasks, including, for example, (a) matching of purchase orders, receipts, and invoices, or (b) WSC direct charges and allocations to UI subsidiaries. Additionally forecasting models were previously not used. Since our last review, UI has adopted and implemented new business systems, including JD Edwards (JDE) Enterprise One as the financial system, including asset management, and Oracle's Customer Care and Billing System (CC&B) as the customer information system.
- ◆ Technology and systems have improved significantly since we last reviewed these activities in 2007. At that time, WSC was just beginning to network computers and there were no field deployment of technology, such as the Panasonic Toughbooks subsequently provided to Field Technicians for accessing CC&B functions. The mix of computer technology included both Windows and Apple technology; now WSC has standardized on Windows computers. Application systems in place were home-grown applications that had minimal capability to efficiently and effectively perform necessary tasks.

Other changes have also been noted within this report; however, the above changes deserve mention in the executive summary section of this report.

C. Listing of Recommendations

This section presents a list of recommendations with the corresponding page of this report where the recommendation is discussed.



II. WATER/WASTEWATER OPERATIONS7

Recommendation II-1	Investigate implementing a computerized maintenance management system and eventually a GIS system. (Refer to Finding II-6).....	32
Recommendation II-2	Continue to focus attention on the MVA and OSHA reportable injury KPIs as a part of the safety program. (Refer to Finding II-7)	33

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Recommendation III-2	Enhance the call center's quality monitoring program to include video or screen captures of CSRs activities while monitoring is occurring. (Refer to Finding III-2).....	59
Recommendation III-3	Formalize the role of the UI and Twin Lakes boards once the Corix acquisition of Utilities, Inc. has been completed. (Refer to Finding III-5).....	59
Recommendation III-4	Develop a code of ethics, train all employees, including Twin Lakes employees, on its content, and require them to annually acknowledge and accept its requirements. (Refer to Finding III-6).....	59
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Recommendation III-6	Place more emphasis on IT training and formally maintain records of training activities. (Refer to Finding III-8).....	60
Recommendation III-7	Regularly perform studies to identify appropriate executive pay levels. (Refer to Finding III-9).....	60
Recommendation III-8	Have the Human Resources organization in Northbrook monitor training and development activities throughout the WSC organization. (Refer to Finding III-10).....	60
Recommendation III-9	Establish a formal comprehensive ERM program. (Refer to Finding III-11).....	61

IV. FINANCIAL MANAGEMENT & STRUCTURE63

Recommendation IV-1 Perform a detailed analysis to verify that the use of the number of equivalent residential connections for allocating costs among regulated utilities reasonably approximates the use of cost-causative factors; subsequently make modifications, as appropriate, if significant variances are noted and a change in procedures can be economically justified. (Refer to Finding IV-1)85

Recommendation IV-2 Emphasize increased use of time reporting for direct charging of time and associated costs. (Refer to Finding IV-1)85

Recommendation IV-3 Regularly perform audits of affiliate relationships and transactions. (Refer to Finding IV-2)85

II. Water/Wastewater Operations

This task area analyzes water/wastewater operations as follows:

- ◆ Organization
 - Organization structure
 - Mission and functions
 - Workforce strategy – employee and contractor mix
- ◆ Performance management
 - Key performance indicators
 - Management reports, scorecards and dashboards
 - Performance trends
 - Performance targets and target setting
 - Initiatives
 - Integration with individual performance planning and evaluation and incentive compensation programs
- ◆ Capital program planning and management
 - System planning
 - Capital program categorization and development
 - Project prioritization schemes
 - Capital budgeting
 - Employee work management
 - Contracting and contractor management
 - Capital project implementation
- ◆ Operations and maintenance program planning and management
 - Condition assessments
 - O&M budgeting
 - Planned maintenance (predictive and preventive maintenance and inspections)
 - Corrective maintenance
 - Employee work management
 - Contracting and contractor management
- ◆ Information technology and systems support
 - Enterprise asset management systems
 - Geographical information systems (GIS)
 - Maps and records (AM/FM)
 - System modeling and planning tools
 - Engineering design tools
 - Employee work management systems



- Contractor management systems
- Maintenance management systems
- Materials management systems
- SCADA
- System control

A. Background & Perspective

The Twin Lakes Utilities, Inc. (Twin Lakes) utility organization is located in northwestern Indiana at the Lake of the Four Seasons subdivision, as shown in *Exhibit II-1*. The subdivision was originally developed as a weekend residence but rapidly transitioned to a year around residential neighborhood.

Exhibit II-1
Lake of the Four Seasons Map
June 25, 2012



Source: MapPoint

The subdivision is served by two separate water production plants and one central sewerage treatment plant.

Water Plants

One water plant (Water Plant One serviced by six wells) is located just south of E 123rd Avenue with the other water plant (Water Plant Two serviced by two wells) being located west of the subdivision near Lima Park (as shown in *Exhibit II-1*). Each of the water plants provide iron removal via filters, as shown in *Exhibit II-2* and *Exhibit II-3*, which are back washed on a daily basis and additional treatment (chlorine and fluoride) performed to enhance water quality.

Exhibit II-2
Water Plant One Filter Equipment
June 25, 2012



Source: Interview 12 (Schumaker & Company Site Visit)

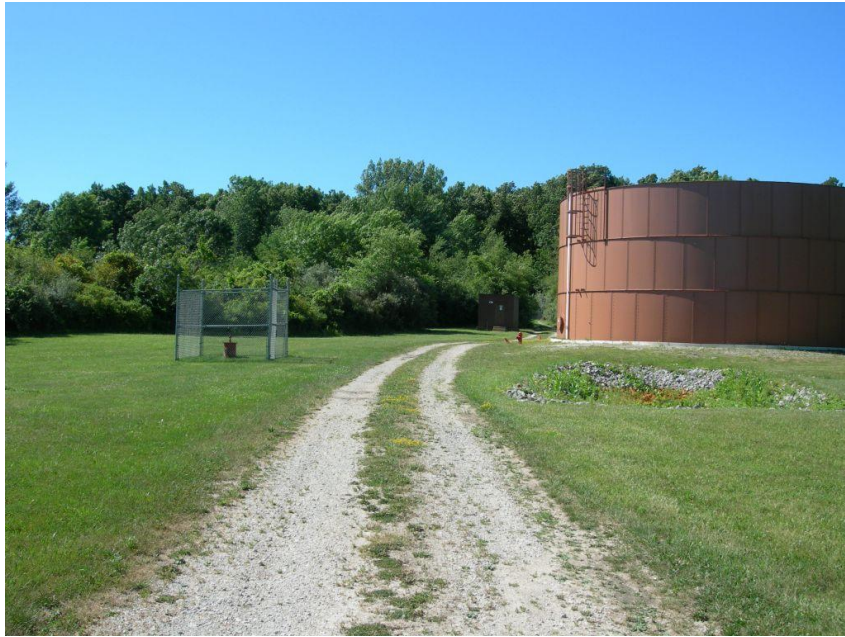
Exhibit II-3
Water Plant Two Filter Equipment
June 25, 2012



Source: Interview 12 (Schumaker & Company Site Visit)

At the main water plant (Water Plant One), the treated water is pumped into the system or stored in a ground level storage tank, as shown in *Exhibit II-4*, until needed in the system. Water Plant Two water is treated and pumped into the system. There is no separate storage tank associated with Water Plant Two. There is one elevated storage tank in the distribution system that is used for maintaining system pressure and surge support.

Exhibit II-4
Water Plant One Ground Level Storage
June 25, 2012



Source: Interview 12 (Schumaker & Company Site Visit)

Wastewater Plant

The wastewater treatment plant (WWTP) is located just south of E 123rd Avenue near Water Plant One. There are three separate trains for sewerage treatment, which all feed into a common contact zone prior to discharge. The digester for one of the trains is shown in *Exhibit II-5* and digesters for some of the other trains are shown in *Exhibit II-6*. The final stage in the waste processing is the chlorine contact zone, as shown in *Exhibit II-7* and *Exhibit II-8*. The wastewater is processed and disinfected prior to being released to a local creek in accordance to various environmental permits.

Exhibit II-5
Wastewater “Package” Treatment Plant
June 25, 2012



Source: Interview 12 (Schumaker & Company Site Visit)

Exhibit II-6
Wastewater Plant Alternate Trains
June 25, 2012



Source: Interview 12 (Schumaker & Company Site Visit)

Exhibit II-7
Wastewater Treatment Plant Chlorine Contact Zone
June 25, 2012



Source: Interview 12 (Schumaker & Company Site Visit)

Exhibit II-8
Wastewater Treatment Plant Treated Discharge Water
June 25, 2012



Source: Interview 12 (Schumaker & Company Site Visit)

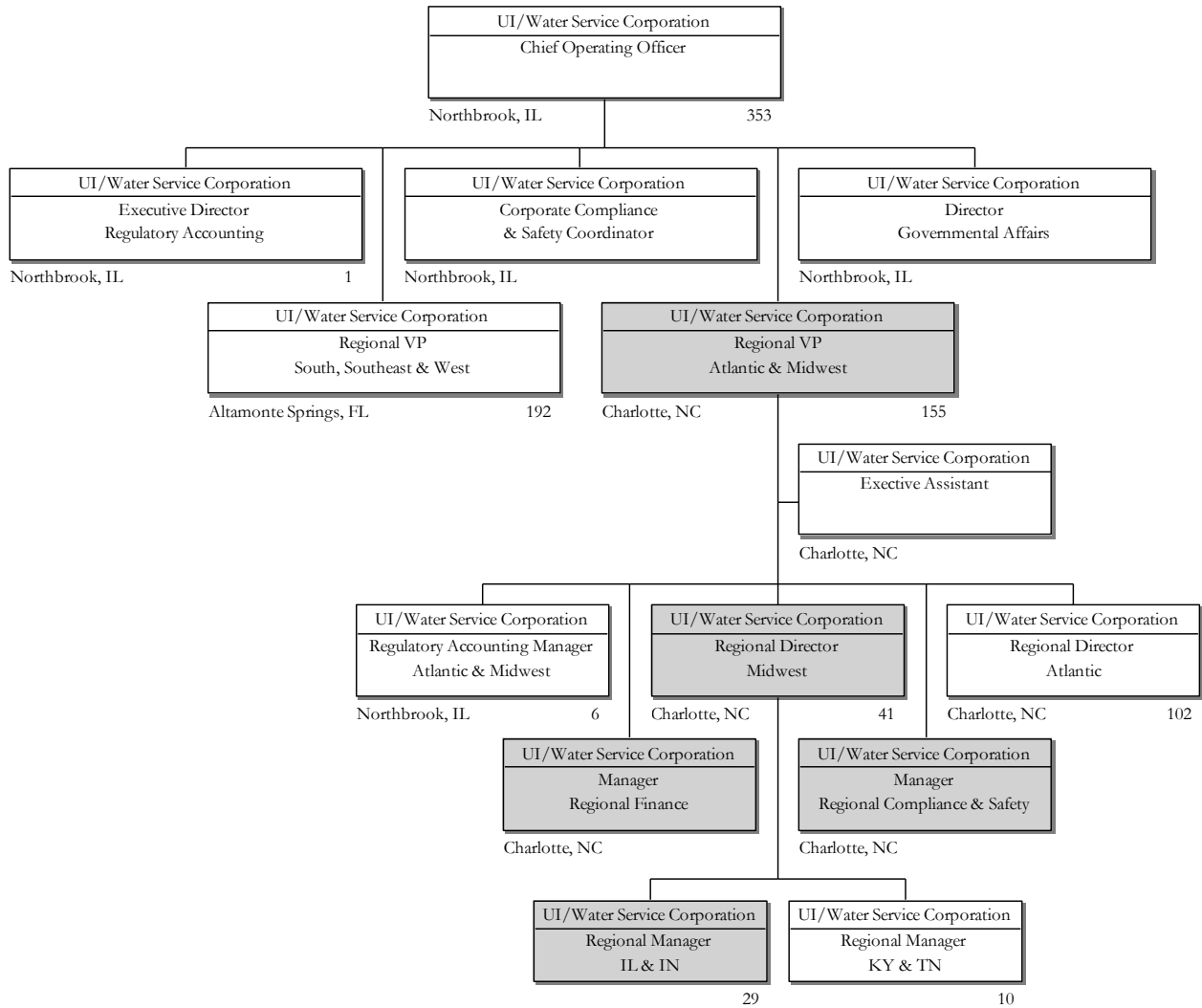
B. Findings & Conclusions

Organization		
Typical Work Steps	Information Required	Key Indicators
Review organization structure.	Organization chart with all approved positions, the incumbent (or vacancy noted), title, and physical location Job descriptions Tabular listing of all positions showing reporting and supervisory relationships	Clearly articulated organization structure exists. Effective position control system is in place. Appropriate balance of centralization and decentralization exists.
Identify mission and functions.	Mission statement Functions of each sub-unit	Clear and appropriate mission statement exists. Well defined functions are consistent with the mission.
Determine the workforce strategy – employee and contractor mix.	Division of labor between employees and contractors – what types of work are assigned to each List of core competencies Collective bargaining agreements Rationale and economics for the work division between employees and contractors	Core competencies are identified and protected. Employee vs. contractor decisions are economically sound. Clear role definitions and deployment flexibility exists. Staffing trends are favorable. Contracting trends are favorable.
Identify governance groups – standing committees and ad hoc teams	List of all standing committees and current ad hoc teams with the charter or purpose of each, the chair and members, the most recent meeting agenda and minutes, and a description of how success is measured	Clear charters or purposes exist. Appropriate membership is being used. Well documented processes exist and are being followed. Sound evaluation of success occurs.

Water/Wastewater Organization

The organization of the personnel responsible for field operations is shown in *Exhibit II-9*. Utilities, Inc. is organized into two major field operations areas, each with a Regional Vice President (RVP) in charge, as shown in *Exhibit II-9*. Twin Lakes is located within the Atlantic & Midwest Region, as shown in the grayed boxes in *Exhibit II-9*.

**Exhibit II-9
Water/Wastewater Field Organization
as of April 30, 2012**



Source: Information Response 4

The Atlantic and Midwest Region is headquartered out of Charlotte (NC). The Midwest Region is headed by a Regional Director located in Charlotte. In addition, there is a Regional Finance Manager and Regional Compliance and Safety Manager that provide regional support for those functions that are both located in Charlotte.

The Indiana operations of the Midwest Region are headquartered out of a small office in a strip mall near the Twin Lakes service area. A Regional Manager and an administrative assistant are located at the office. Within Indiana, the organization is as shown in *Exhibit II-10*. There is an Area Manager located at Twin Lakes that is responsible of the Twin Lakes operations. The Area Manager has seven field personnel reporting to him as shown in *Exhibit II-10*.

These field personnel are organized into two categories:

- ◆ *Operators* – Individuals that are state qualified and responsible for operating the water and wastewater plants.
- ◆ *Field Technicians* – Individuals that work in the field doing such things as meter change outs, meter sets, meter readings, leak investigations, valves operations etc.

In addition to Twin Lakes, this group is also responsible for the other two smaller water operations (Water Service Company of Indiana, Inc. and Indiana Water Service, Inc.), which are located no more than ½ hour drive from Twin Lakes.

**Exhibit II-10
Twin Lakes Field Organization
as of April 30, 2012**



Source: Information Response 4

Twin Lakes has a number of initiatives planned for 2012, and future years, most of which include tasks outlined from an order issued by the Indiana Utility Regulatory Commission (IURC) in Cause Number 43128-S1, which include the following:

- ◆ Install a minimum of (10) sewer flow monitors within the sewer collection system and monitor flows for a period of 90-days beginning March 1, 2010.
- ◆ Report flow data to IURC for March 2010 by April 15, 2010 and submit a final report analysis to IURC within 45-days of completing the 90 day flow monitoring.
- ◆ Submit a design summary to IURC for the replacement of Lift Station 'B' by December 12, 2009.
- ◆ Clean and televise a minimum of 10% of the sewer collection system per year.
- ◆ Identify, prioritize, and repair or replace inferior sections of sewer main to remediate inflow and infiltration issues.
- ◆ Conduct smoke testing of the sewer collection system to help identify areas of inflow and infiltration entering the sewer collections system
- ◆ Conduct a "Sump Pump Inspection Program" within the Twin Lakes service area.

All of the items with reporting dates to the regulatory agencies have been met to date. The flow monitors that were placed into service prior to March 1, 2010, are still in place and data is gathered from these monitors periodically in order to maintain Twin Lakes' investigation of additional issues that may occur while investigating other areas via televising and cleaning schedules. The sewer collection cleaning schedule is an ongoing project. The 2012 Televising and Cleaning was completed, as of June 2012. Twin Lakes has also received video documentation of the 2012 televising work to schedule necessary repairs or replacements of sewer collection mains that indicate areas of Inflow and Infiltration, root masses, separations between pipe sections, or signs of defective piping material. These findings from the documentation are being addressed as they are identified and will be prioritized based upon the overall review of the piping structure.

In addition to the above tasks outlined in the IURC order, Twin Lakes also conducted a complete and comprehensive "Manhole Inspection Program" in 2011, to which all 533 manholes within the Lakes of the Four Seasons subdivision were inspected by an outside contractor and reported deficiencies to Twin Lakes. This list is quite extensive and the process of repairing or replacing manhole structures and sections began in the second semester of 2011, and will be an ongoing process throughout 2012 and future years determined by the degree of potential leakage within each structure and in accordance with Twin Lakes planned budget for the year.

The sump pump inspection program is an ongoing process; however, this process has slowed during the winter months due to weather conditions and lack of personnel. It was decided by Twin Lakes management that an outside contractor will be brought in to aid this investigation with appointments being set up with customers to conduct such inspections.

Twin Lakes does, as a general rule, use outside construction contractors for all of its sewer and water main repairs and replacements, which allows its current staff of employees to carry out daily activities including the operation of sewer and water plants, providing customers with water and wastewater service, investigating and completing service orders and field activities as required to satisfy customer needs, performing meter reading duties for water and sewer billings, and routine upkeep and maintenance of the company-owned facilities and equipment.



Performance Management		
Typical Work Steps	Information Required	Key Indicators
Review key performance indicators.	List of all key performance indicators utilized and their definitions	All dimensions of utility performance covered: <ul style="list-style-type: none"> ◆ Public safety ◆ Employee and contractor safety ◆ Reliability ◆ Quality ◆ System integrity ◆ Commodity integrity ◆ Responsiveness to customer requests ◆ Capital costs ◆ O&M costs Appropriate and clearly-defined measurements are in place. Favorable results against targets occur.
Review management reports, scorecards, and dashboards.	Copy of all most recent management reports, scorecards, and dashboards utilized, the preparer, their frequency and their distribution lists	Appropriate content, frequency, and distribution of reports, scorecards, and dashboards exists
Review performance targets and target setting. Assess results against targets.	List of all performance targets or control limits Description of how each target or control limit was set and what is the basis (e.g., benchmark, improvement from last year)	Targets or control limits are set for each key performance indicator. Targets or control limits are set appropriately.
Review improvement initiatives.	Description and documentation of current and planned initiatives Copies of all business plans Description of how initiatives are managed	Credible initiatives exist that are likely to achieve each performance improvement target. Initiatives are well scoped, resourced, scheduled, and project managed.

Finding II-1 Utilities, Inc. and the Midwest Region has developed a fairly extensive key performance indicator (KPI) reporting and monitoring process.

Utilities, Inc. has developed a fairly extensive key performance indicator (KPI) program. This program has three levels of performance reporting specifically Tier I – Utilities, Inc. level, Tier II Departmental/Regional level and Tier III Individual level. Samples of this reporting (Tier II KPIs) are shown in *Exhibit II-11* through *Exhibit II-13*. The KPI's are grouped into specific KPIs as follows:

- ◆ Shareholder
- ◆ Customer
- ◆ Employees
- ◆ Community

During our last management and operations review in the 2006-2007 timeframe, Schumaker & Company consultants had made recommendations regarding the implementation of a more formal strategic planning program, which this KPI program goes a long way to fulfilling.

**Exhibit II-11
Midwest Operations KPI Report Example
as of December 31, 2009**

CORPORATE		MIDWEST OPERATIONS										Monthly Actuals												Nov-09
Perspectives	Mission	Objectives	Objectives	Measure	2008 Actuals	2009 Target	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Actuals	YTD Target	YTD Variance	Vision (3 Year)		
Shareholder	Fair Return	Improve EBITDA	Improve Core EBITDA Margin	Improve Core EBITDA Margin	Core EBITDA Margin																			
			Meet Core EBITDA Budget	Improve EBITDA	Meet Core EBITDA Budget	Dollars																		
			Meet CIAC Budget	Meet CIAC Budget	Dollars																			
		Increase ROE	Complete Projects on Budget	% of Monthly Budget & YTD \$																				
Employee	Safe, Challenging, Enjoyable Work Environment	Reduce MVA Rate	Reduce MVA Rate	Reduce MVA Rate	# of MVA's / 1000,000 Miles																			
			Reduce Work Related Injury Rate	Reduce Work Related Injury Rate	# of OSHA Reportable Injuries / 100 Employees																			
			Reduce Turnover	Reduce Turnover	Turnover Rate																			
Community	Act with Integrity, Protect the	Maintain & Improve Compliance	Maintain & Improve Compliance	"Soft Systems" in Compliance																				

Source: Information Response 31

By looking at *Exhibit II-11* through *Exhibit II-13*, one can get a sense for how the various KPIs have changed over the 2009 through 2011 timeframe and how the targets have also changed. Items which appear in red have not substantially met the objective for the year.

**Exhibit II-12
Midwest Operations KPI Report Example
as of December 31, 2010**

OPERATIONS (Midwest) Tier II KPI Report												
CORPORATE												
Mission	Objectives	Objectives	Measure	2009 Actuals	2010 Target	1Q10 Actuals	2Q10 Actuals	3Q10 Actuals	4Q Actuals	YTD Actual	YTD Target	YTD Variance B/(W)
Fair Return	Improve Core EBITDA	Revenue Performance	Dollars (\$MM)									
		O&M Budget Performance	Dollars (\$MM)									
		Meet Core EBITDA Budget	Dollars (\$MM)									
		CapEx Budget Performance	Dollars (\$MM)									
		CIAC Budget Performance	Dollars (\$MM)									
		Accuracy of Purchase Orders (PO) submitted	% of POs submitted with errors									
		Meet Rate Case Plan	Meet 2010 Incremental Rate Case Revenue (\$MM)									
% of filed rate cases in accordance to plan												
Safe, Reliable, Cost Effective Service	Improve Customer Satisfaction	Service Orders Completed On-Time	% Completed By Due Date									
		Improve Meter Reading Accuracy	% of Late Reads									
			% of No Reads									
			% of Estimated Reads									
			% of Bad Reads									
Reduce Water Quality Issues	% of Water Quality Field Activities Issued/ Total Customers											
Safe, Challenging, Enjoyable Work Environment	Reduce MVA Rate	Reduce MVA Rate	# of MVA's / 1,000,000 Miles									
	Reduce Work Related Injury Rate	Reduce Work Related Injury Rate	# of OSHA Reportable Injuries / 100 Employees									
	Implement Employee Development / Performance / Recognition & Training Program (PERK Program)	Implement Tier III KPIs	Program Status									
	Reduce Turnover	Reduce Turnover	# of Employee Turnover/Approved Period Headcount									
Act with Integrity, Protect the Environment and Enhance the Community	Maintain & Improve Compliance	Maintain & Improve Compliance	% of Systems* in Compliance									
			% of Systems* in Compliance or on a Compliance Plan									
	Improve Community Relations	Identify Community Activities	Plan Status									

Source: Information Response 31

**Exhibit II-13
Midwest Operations KPI Report Example
as of December 31, 2011**

Utilities, Inc. [™] OPERATIONS (Midwest) Tier II.5 KPI Report																	
CORPORATE			Objectives	Measure	2010 Actual	2011 Target	1Q11 Actual	2Q11 Actual	3Q11 Actual	Oct Actual	Nov Actual	Dec Actual	4Q11 Actual	YTD Actual	YTD Target	YTD Variance B/(W)	
Perspectives	Mission	Objectives															
Shareholder	Fair Return	Improve Core EBITDA	Revenue Performance	Dollars (\$MM)													
			O&M Budget Performance	Dollars (\$MM)													
			TOTI Budget	Dollars (\$MM)													
			Meet Core EBITDA Budget	Dollars (\$MM)													
			CapEx Budget Performance	Dollars (\$MM)													
			CIAC Budget Performance	Dollars (\$MM)													
			Meet Rate Case Plan	Meet 2011 Incremental Rate Case Revenue (\$MM) % of filed rate cases in accordance to plan													
Customer	Safe, Reliable, Cost Effective Service	Improve Customer Satisfaction	Service Orders Completed On-Time	% Completed By Due Date													
			On-Time & Accurate Meter Reads	% of On-Time & Accurate Meter Reads													
				% of Estimated Reads													
Reduce Water Quality Issues	% of Water Quality Field Activities Issued/ Total Customers																
Employee	Safe, Challenging, Enjoyable Work Environment	Reduce MVA Rate	Reduce MVA Rate	# of On-Road MVA's / 1,000,000 Miles # of Off-Road MVA's													
		Reduce Work Related Injury Rate	Reduce Work Related Injury Rate	# of OSHA Reportable Injuries / 100 Employees													
Community	Act with Integrity, Protect the Environment and Enhance the Community	Maintain & Improve Compliance	Maintain & Improve Compliance	% of System Days* in Compliance % of Systems* in Compliance or on a Compliance Plan													
		Improve Community Relations	Implement Community Participation Program	100% Program Implementation													

Source: Information Response 31

Finding II-2 The organization and management for field activities is reasonable.

As shown in *Exhibit II-10*, there are two operators and five field technicians located in Indiana that report to the Area Manager. These personnel are responsible for not only Twin Lakes but also Water Service Company of Indiana, Inc. and Indiana Water Service, Inc., which are located within 1/2 hour of Twin Lakes. The operators are responsible for the operations of each water and wastewater plant in each of these systems, which typically involves the back flushing of filters and taking of water samples according to a defined schedule. The field technicians are responsible for all field activities such as meter sets, change-outs, leak surveys, and meter readings. The field technicians are given Panasonic Toughbooks, which are used to dispatch work to the field forces and also provide system maps and other relevant information.

A reasonable amount of supervisory control and data acquisition (SCADA) controls (monitor) have been implemented within Twin Lakes. Currently, Twin Lakes uses a SCADA system manufactured by Mission Communications (Mission). The Mission SCADA system provides cellular coverage with centralized computer services to offer limited monitoring and control capabilities. It can be used as stand-alone system or complement existing radio or phone line based SCADA systems.

The Mission SCADA System uses various remote terminal units (RTUs) to interface normal input and output functions with their digital cellular network. The mission system includes the following features:

- ◆ Two secure web sites
- ◆ Analysis and alerts
- ◆ Management reports
- ◆ Maintenance logs
- ◆ Site access logs
- ◆ Alarm message delivery
- ◆ Graphing and display software
- ◆ Pump runtimes and starts

The Mission SCADA system can generate alarm and status notifications to plant personnel via pagers, e-mail, faxes, or voice phone calls. All alarms are confirmed by time and recipient, and tracked out to the problem site. The information for Twin Lakes water or wastewater systems is graphically displayed on a secure website. Users log on and get real time information for all RTUs with alarms or AC (power) failures detailed in a single glance. The Twin Lakes system incorporates Mission's M-110 and M-800 RTUs.

However, there is still neither a computer based maintenance management system nor an enterprise GIS in use within Twin Lakes.

Capital Program Activities

Capital Program Planning and Management		
Typical Work Steps	Information Required	Key Indicators
Review system planning.	Current system plan Description of the system planning process Current consumption forecast Description of the consumption forecasting process 10 year comparison of consumption forecast to actual consumption – include every forecast for each individual year	A comprehensive system plan exists. An appropriate system planning process is employed. A sound load forecasting process is utilized. Consumption forecasting is accurate.
Review capital program categorization and development.	Description of capital program categories (capacity expansion, reliability, road moves, etc.) 10 year trends of capital expenditures by category	Capital program categories are useful. Capital spending trends are favorable.
Evaluate project prioritization scheme.	Description of capital project prioritization scheme and process Listing of most recent year's proposed projects, the factors used in prioritization and their priority rating	A prioritization process exists. The prioritization process is objective. The prioritization process is applied consistently.
Review capital budgeting process.	Description of the capital budgeting process Current capital budget Explanation of how the total amount of capital expenditure is set in the budget	Capital budgeting process is sound. Capital budget has an appropriate planning horizon and detail. Budgeted vs. actual capital expenditure variance trends are reasonable. Capital expenditure allocation is appropriate.

Finding II-3 Twin Lakes has developed a system plan in the last five years.

Twin Lakes undertook a study of their water supply in the 2007 to 2008 timeframe. This study resulted in a final report (Twin Lakes Water Supply Plan – February 2008). An outside engineering firm was engaged to prepare a facilities planning report to summarize the existing conditions and evaluate the water supply system needs for the next 10 years. Items included in the report are documentation and analysis of recent demand data, examination of existing facility conditions, estimate of future service area population, identification of existing shortcomings and proposal of facility improvements needed for future water supply requirements. Based on the results of the report, recommendations will be made for improvements to the water supply, treatment, and storage facilities that will meet the projected 2018 system demands. This report assessed the existing water supply plant and found it adequate for existing requirements and also looked at changes that might be required if future growth occurred outside of the



Twin Lakes current service territory and what changes would be required at Twin Lakes to support projected growth, which does not appear to be occurring in the current economy.

In addition, Twin Lakes has performed an ongoing assessment of its sewer system. A final report on that assessment was issued on September 17, 2007 and many of the changes recommended have been implemented.

In addition an outside firm was retained to prepare a facilities planning report to summarize the existing conditions and evaluate the wastewater treatment needs for the next 10 years at the Twin Lakes WWTP. The report includes an analysis of recent flow data, documentation of existing facility conditions, estimate of future regulatory conditions, estimate of future service area population, identification of existing shortcomings, and proposed facility improvements needed for the Design Year 2018.

In summary, the Twin Lakes WWTP currently provides adequate treatment during normal, dry weather flow conditions and can continue to do so for the proposed Design Year 2018 flows. The ability to effectively handle peak flows due to wet weather is the major limiting factor for current and future operations. It is recommended that proposed improvements discussed herein be implemented in two phases, with the first phase including the plant upgrades necessary for a plant rated Daily Average Flow (DAF) of 1.44 MGD. The second phase will include those improvements necessary to handle peak wet weather flows once data becomes available to properly size these facilities.

Finding II-4 Capital expenditures have been increased over the last five years and are expected to grow over the next several years.

The capital expenditure categories for Twin Lakes are divided into four main sections (Capital Project Spending, Capital Plant Spending, Capital Time Spending, and Transportation Spending). These categories are all projected to a five or seven year level and are reviewed on a weekly, monthly, and quarterly basis to make any necessary adjustments due to timing and/or emergency issue decisions.

Capital Project Spending is the budgetary means for planned capital expenditures that typically involve a minimum of \$50,000 each or take at least 30 days to complete. Typical capital improvements may include replacement of existing assets or structures that can increase capacities, improve operations or service, provide maintenance to existing assets, or maintain compliance with regulatory agencies. During the current year, Twin Lakes Capital Project Spending budget is mainly geared toward the sewer system improvements necessary to remain in compliance with the IURC order from Cause Number 43128-S1.

Capital Plant Spending (or general ledger additions) is used for capital expenditures typically under \$50,000 threshold in which work would be completed in less than 30 days. These expenditures would mainly include items that relate to company-owned assets or structures that develop issues or breakdowns during the fiscal year. Each company prepares and manages its budget for the fiscal year. This budget is typically developed based on historic spending trends and any known expenditures that will be needed in the upcoming fiscal year. This is considered the company's "checkbook" to operate with during the

fiscal year to pay for items such as replacing smaller equipment, replacing sections of water or sewer main, etc. where breaks may occur throughout the year, site improvements or restorations from excavations, etc.

Capital Time Spending is the budgetary means that is comprised from a percentage of the total Capital Plant Spending budget for each company. It is an estimate of employee time that will be spent during the course of the fiscal year working on Capital Plant Spending items as mentioned in the previous paragraph.

Transportation Spending is simply the budgetary means to have money available for replacement or purchases of new company vehicles during a fiscal year. This amount is also projected over upcoming years and is reviewed regularly to make necessary adjustments. Vehicle mileage and maintenance records are recorded monthly and reviewed to make the necessary projections for upcoming replacements or purchases.

The capital expenditure for the past five four years are shown in *Exhibit II-14*. The numbers reflected for 2007 are incomplete in that there were probably additional capital expenditures although they just were not tracked as they are now.

Exhibit II-14
Capital Expenditures
2007 to 2011

Category/Project	2007	2008	2009	2010	2011
Plant Spending		339,383	634,662	513,484	379,311
Plant Cap Time		109,751	163,561	131,875	120,781
Transportation		12,425	7,699	(2,245)	44,071
PROJECTS:					
Master Plan for Water & Sewer	135,849	109,093	(70,000)		
Engineering Based on Master Plan		516	(516)		
I & I Repairs		1,204	9,693		
Engineer Manhole 307 Relief Project		151,386	26,006		
Lift Station E Replace, Wet Well and Controls			997		
Rod and Video		14,807			
Lift Station E Rehabilitation					160,223
Manhole Inspections And Repairs					76,001
Smoke Testing					18,484
Televising & Jetting Swr Mains					95,841
Total	135,849	738,565	772,102	643,114	894,710

Source: Information Response 19 Attachment 2

Generally, capital expenditures have been running in the roughly \$700,000 range in each of the last four years, as shown in *Exhibit II-14*. However, capital expenditures are expected to increase to the roughly \$900,000 range over the next several years, as shown in *Exhibit II-15*. There are two items a second stage sludge storage tank and the replacement of the deteriorating ground storage tank whose timing will be determined by load growth and the status of the condition of the ground storage tank.



**Exhibit II-15
Twin Lakes Capital Budget
as of June 30, 2012**

Category	2012	2013	2014	2015	2016	2017
Plant Spending	400,000	400,000	400,000	400,000	400,000	400,000
Plant Cap Time	120,200	123,200	35,700	123,200	123,200	123,200
Project Cap Time	18,000	15,000	102,500	15,000	15,000	15,000
Transportation (IN)	-	65,000	30,000	30,000	30,000	30,000
Capital Projects						
Sewer Capital Improvement Program	300,000	300,000	300,000	300,000	300,000	300,000
Chlorine Gas Replacement	60,000	-	-	-	-	-
Second Sludge Storage Tank (2009593)	-	-	750,000	-	-	-
Replace deteriorating ground storage tank (.5M Gallons)	-	-	1,000,000	-	-	-
	\$ 898,200	\$ 903,200	\$ 2,618,200	\$ 868,200	\$ 868,200	\$ 868,200

Source: Information Response 41

Finding II-5 All capital projects are reviewed and approved by a Capital Project Review Team.

Members of the Capital Project Review Team (CPRT) include:

- ◆ All five Regional Directors
- ◆ Capital Projects Manager
- ◆ Regulatory Accounting Manager
- ◆ Regional Finance Manager
- ◆ Senior Regulatory Accountants, one from each team
- ◆ Project Managers
- ◆ Regional Managers representing each region
- ◆ Optional attendance: RVPs, Regional Finance Managers; Executive Director-Regulatory Accounting; Regional Accounting Manager, other RMs as project owners when their projects are discussed.

The CPRT meets every Friday at 2:00 pm through most of the year. Meetings are bi-weekly during the third quarter as the need to meet lessens after all projects in the current year's capital expenditures schedule have been reviewed and acted on.

The CPRT reviews all projects greater than \$50,000, which includes projects associated with all operating companies as well as corporate projects. This type of an approach is fairly standard in the industry.

Operations and Maintenance Activities

Operations and Maintenance Program Planning and Management		
Typical Work Steps	Information Required	Key Indicators
Review condition assessments.	Most recent condition assessment, in whatever form available, for each type Description of the initiatives taken as a result of each condition assessment	Condition assessments exist. Condition assessments are used and useful.
Analyze the O&M budgeting process.	Description of the O&M budgeting process Current O&M budget 10 year trends of actual vs. budgeted O&M expenditures by category 10 year trends of O&M activity costs Explanation of how the total amount of O&M expenditure is set in the budget	O&M budgeting process is sound O&M budget has an appropriate planning horizon and detail. Budget vs. actual O&M expenditure variance trends are reasonable. O&M activity costs are calculated and tracked. O&M expenditure allocation is appropriate.
.Evaluate planned maintenance programs – predictive and preventive maintenance and inspections.	Description of planned maintenance programs for each asset type	Planned maintenance programs exist and are well documented. Planned maintenance programs are being followed.
Review corrective maintenance practices and procedures.	Description of the corrective maintenance management process	Sound corrective maintenance management process exists. Corrective maintenance trends are favorable.

Finding II-6 Operations and maintenance activities are reasonable, but could be enhanced.

Schumaker & Company consultants visited the Twin Lakes field operations in Indiana. The facilities appear to be well maintained and activities appear to be scheduled to continue to maintain these facilities. We requested a description of maintenance management practices that are used for both planned and unplanned (corrective) activities. We were provided an Excel spreadsheet that provided a listing on daily, weekly, and as required activities that are performed to maintain the facilities, as sample of which is provided in *Exhibit II-16*.



Exhibit II-16
Sample Maintenance Management Practices
as of May 24, 2012

Wastewater:	Responsible Employee(s)	Maintenance and Corrective Practice	Parts Inventory
Blower(s)	WWTP Operator	Daily inspection and recording of CFM's. Replace filters, grease bearings, check temp and vibration. If additional work is required an independent contractor is contacted to make the necessary repairs.	Filters, grease, electronic temperature gauge, motors
Generator(s)	WWTP Operator, Field Tech	Start generator(s) on a weekly basis. Record runtime hours and number of starts. Check fuel level on diesel units. Replace filters and check/change fluids. If additional work is required an independent contractor is contacted to make the necessary repairs.	Order parts as needed.
Sludge Tank Mixers, Clarifier Rake Arms, Influent Grinder	WWTP Operator	Daily check of mixers and clarifier rake arms. Grease clarifier bearings, clean out scum troughs. Check mixers for vibration. If additional work is required an independent contractor is contacted to make the necessary repairs.	Grease
Chemical Feed Equipment	WWTP Operator	Daily check and inspection of chemical feed equipment. Record all chemical feed. Rebuild chemical feed pumps when required. If additional work is required an independent contractor is contacted to make the necessary repairs.	Chemical Feed Pump rebuild kits.
RAS Pumps	WWTP Operator	Daily inspection and recording of RAS flow. Pull and clean pumps when required. Grease bearings. If additional work is required an independent contractor is contacted to make the necessary repairs.	Order parts as needed.
Lab equipment	WWTP Operator	Daily inspection of lab equipment. Daily calibration of probes where appropriate. Temperature checks where appropriate.	Various spare lab inventory equipment keep in stock and parts are ordered as necessary.
Lift Station(s)	Field Tech, WWTP Operator	Daily recording of pump hours. Pull and clean floats. Pull and clean smaller pumps. If additional work is required an independent contractor is contacted to make the necessary repairs.	Lift Station pumps of various horsepower. Floats Control Panel electrical equipment.
Odor Removal Equipment	WWTP Operator, Field Tech	Monitor H2S readings. Rebuild carbon tubes when needed. Check air mover equipment.	Carbon media. Spare carbon tubes.
Influent Screen	WWTP Operator	Daily cleaning of influent Screen	Rakes
Composite Samplers	WWTP Operator	Daily inspection of composite samples and recording temperature. Replace sampler tubes when required.	Sampler tubes

Source: Information Request 27

While this listing is a good starting point for a maintenance management system for a 3,200 customer system, we would expect that Utilities, Inc. would be providing a computerized maintenance management system that could be utilized across the whole company. Since our last audit (when we made a similar finding and recommendation), Utilities, Inc. has significantly improved its information technology infrastructure and implemented JDE and CC&B. These improvements in information technology should make the implementation of a computerized maintenance management system an easier activity. The Equipment Maintenance Business Rules as described in the Business Rules and Process Manual for JDE were originally intended to be used by operation field personnel. Although, the Equipment Maintenance module is a part of JDE, it has not been utilized as its implementation would have required staff resources that were not available at that time. At that time, the current process at the local level was deemed by management to adequately encompass the process and activities as prescribed in the module however, Schumaker & Company consultants believe that this decision should be revisited. Other practices that we have seen other water utilities implement have been periodic pump vibration and non-destructive testing procedures.

Service disruption statistics show a decrease in occurrences over the last three years, as are shown in *Exhibit II-17*. A review of Twin Lakes “Report CMRP0008” taken from Customer Care & Billing (CC&B) records from the dates of 4/11/2009 through 4/11/2012 show the service disruptions over the last three years, which total 65. The (65) service disruptions include water main breaks, service line leaks and hydrant replacements, although a visual scan of the records reveals that most of the disruptions are due to either main or service line breaks.

Exhibit II-17
Service Disruption Statistics
as of May 11, 2012

Year	Service Disruptions
2009	12
2010	24
2011	21
2012	8
4 Year Total	65

Source: Information Response 28

Finding II-7 Utilities Inc. has developed a robust safety program, although further improvement is necessary.

One item that was in the process of being developed during our last review in 2007 was a more robust safety program. The safety program is now documented in a 71 page Safety Manual, which was provided to us for our review. The manual also includes a compilation of forms that are used for reporting various aspects on the safety program. In addition to the individual responsible for Corporate Compliance and Safety at the Utilities, Inc. level, each region also has a manager of regional compliance and safety as shown previously in *Exhibit II-9*.

Notwithstanding these improvements, the Reduce MVA Rate targets have been continually not met as shown previously in *Exhibit II-11* through *Exhibit II-13*. As a result, this KPI was further divided into two KPIs in 2011, as shown in *Exhibit II-13*. As shown previously in *Exhibit II-13* (Midwest Operations) and later in *Exhibit III-11* (Corporate), the following two KPIs, both safety related, were highlighted “red” or “critical” in 2011, as they were considered substantially not met by UI management:

- ◆ # of on-road moving vehicle accidents (MVAs)/1,000,000 miles
- ◆ #of OSHA reportable injuries/100 employees



Management Information Systems

Information Technology and Systems Support		
Typical Work Steps	Information Required	Key Indicators
Review all information technology and support systems, including: <ul style="list-style-type: none"> ◆ Enterprise asset management systems ◆ Geographical information systems (GIS) ◆ Maps and records (AM/FM) ◆ System modeling and planning tools ◆ Engineering design tools ◆ Employee work management systems ◆ Contractor management systems ◆ Materials management systems ◆ Maintenance management systems ◆ Outage management systems ◆ SCADA ◆ System control 	For each system, provide: <ul style="list-style-type: none"> ◆ Description of the system and high level flow charts ◆ Vintage ◆ Author ◆ Current owner ◆ Work units that use it ◆ Plans for enhancement or replacement ◆ Integration points with other systems ◆ Data quality and integrity procedures 	For each system: <ul style="list-style-type: none"> ◆ System is reasonable modern. ◆ Clear ownership exists. ◆ Appropriate plans for enhancement and replacement are in place. ◆ Minimal duplication among systems exists. ◆ Used by appropriate work groups. ◆ Appropriately integrated with other systems. ◆ Data quality and integrity is assured.

Finding II-8 The use of technology has improved significantly over the last five years.

Utilities, Inc. implementation of information technology has improved since our last management audit in 2005. With the implementation of JDE and CC&B, Utilities, Inc. was required to update much of its information technology. This also impacted the field forces in that field technicians now carry Panasonic Toughbooks from which they can receive their work orders.

C. Recommendations

Recommendation II-1 Investigate implementing a computerized maintenance management system and eventually a GIS system. (Refer to Finding II-6)

Since our last audit (when we made a similar finding and recommendation), Utilities, Inc. has significantly improved its information technology infrastructure and implemented JDE and CC&B. These improvements in information technology should make the implementation of a computerized maintenance management system an easier activity. In our experience, we are seeing larger utilities implement computerized maintenance management systems for managing, reporting, and controlling maintenance activities. Although Twin Lakes by itself is a smaller utility, being a part of a larger entity (Utilities, Inc.), there should be a benefit for implementing a system-wide maintenance management system in which all the smaller utilities could realize some benefit and share in the costs. Other practices that we have seen other water/wastewater utilities implement have also included formal GIS systems and periodic pump vibration and non-destructive testing procedures.

Recommendation II-2 Continue to focus attention on the MVA and OSHA reportable injury KPIs as a part of the safety program. (Refer to Finding II-7)

The MVA and OSHA reportable injury KPIs need to be continually reported and specific programs developed to bring these KPIs to the target or better. Schumaker & Company's discussions with UI management indicate that safety is of a high concern to the organization, yet the two KPIs substantially not met in 2011 were safety related. Key WSC management personnel should work together to identify the root causes of why these two KPIs were not met, and develop an action plan to address each one.



III. Customer Service and Key Support Units

This task area addresses support functions provided by Water Service Corporation (WSC) employees, such as:

- ◆ Customer service
- ◆ Executive
- ◆ Technology services
- ◆ Human resources and payroll
- ◆ Legal/risk management/administration

The Accounting & Finance and Regulatory Accounting functions are addressed in *Chapter IV – Financial Management & Structure*.

A. Background & Perspective

Support Unit Organization and Management		
Typical Work Steps	Information Required	Key Indicators
Review organization structure.	Organization chart with all approved positions, the incumbent (or vacancy noted), title, and physical location Tabular listing of all positions showing reporting and supervisory relationships Service level agreements Job descriptions	Clearly articulated organization structure exists. Effective position control system is in place. Appropriate balance of centralization and decentralization exists. Appropriate use of shared services occurs.
Identify mission and functions.	Mission statement Functions of each sub-unit	Clear and appropriate mission statement exists. Well defined functions consistent with the mission exist.
Determine the workforce strategy – employee and contractor mix.	Division of labor between employees and contractors – what types of work are assigned to each List of core competencies Collective bargaining agreements Rationale and economics for the work division between employees and contractors 10 year staffing trends by title (employee and contractor) and expenditure levels	Core competencies are identified and protected. Employee vs. contractor decisions are economically sound. Clear role definitions and deployment flexibility exists. Staffing trends are favorable. Contracting trends are favorable.



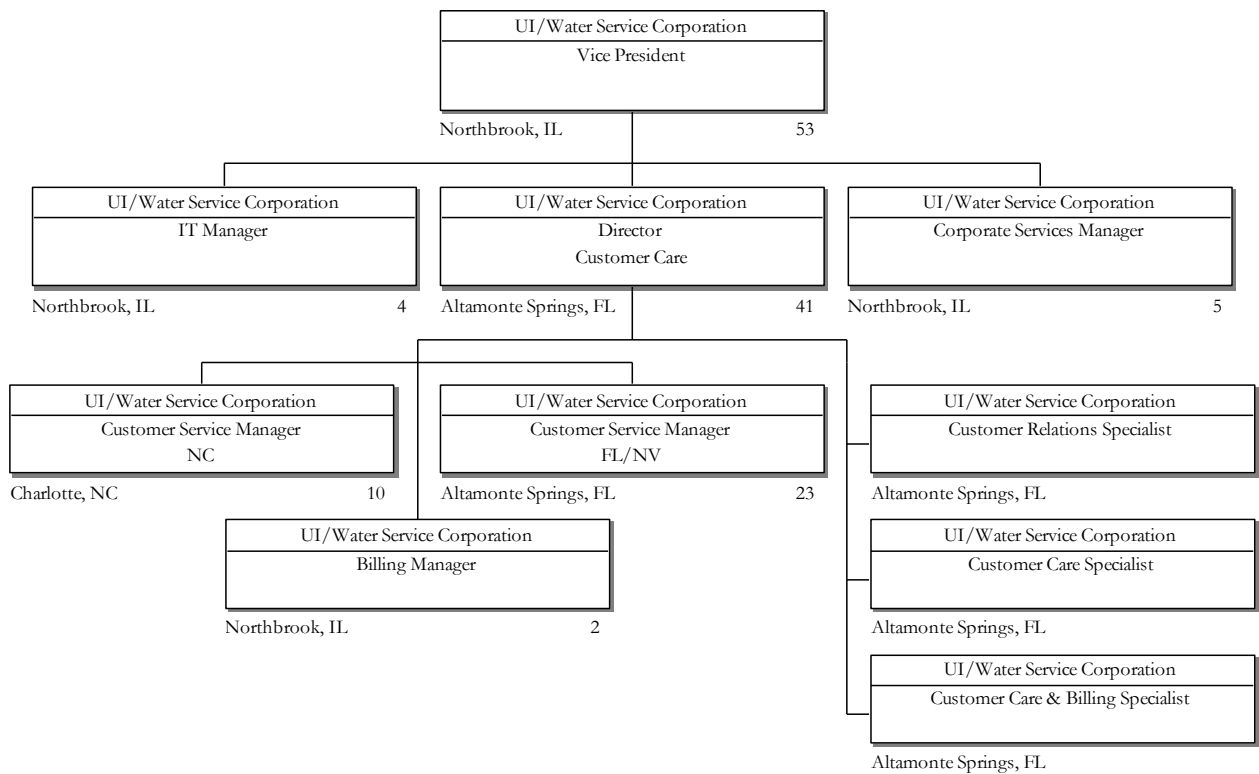
Support Unit Performance Management		
Typical Work Steps	Information Required	Key Indicators
Identify key performance indicators.	List of all key performance indicators utilized and their definitions	Appropriate and clearly defined measurements exist.
Review management reports, scorecards and dashboards	Copy of all most recent management reports, scorecards and dashboards utilized, the preparer, their frequency and their distribution lists	Appropriate content, frequency, and distribution of reports, scorecards, and dashboards exists
Review performance targets and target setting Assess results against targets.	List of all performance targets Description of how each target or control limit was set and what is the basis (e.g., benchmark, improvement from last year)	Targets or control limits are set for each key performance indicator. Targets or control limits are set appropriately.
Review improvement initiatives.	Description and documentation of current and planned initiatives Copies of all business plans Description of how initiatives are managed	Credible initiatives exist that are likely to achieve each performance improvement target. Initiatives are well scoped, resourced, scheduled, and project managed.
Evaluate integration of performance management with individual performance planning and evaluation and incentive compensation programs.	Copies of all individual performance plans and explanation of how performance measurement is integrated with the incentive compensation program	Clear line of sight between performance targets and individual performance evaluations exists.

Customer Service

Organization & Structure

The Customer Care organization, which reports to a Vice President (VP) within Waster Service Corporation, is illustrated in *Exhibit III-1*. Also reporting to this VP is the Information Technology (IT) and Corporate Services groups.

**Exhibit III-1
Customer Care Organization
as of April 30, 2012**



Source: Information Response 4

Additionally, the Customer Care organization may use contractors to supplement their staff either during peak times or to fill vacant positions.

Besides two Customer Services Managers (NC and FL) and a Billing Manager, the Customer Care Director also has three other employees:

- ◆ A Customer Relations Specialist handles commission/Better Business Bureau (BBB) complaints and bankruptcies.
- ◆ The Customer Care Specialist handles electronic funds transfer (EFT) payment postings, as payment are sent to FISC (Lewiston, ME) based on each-day postings to Customer Care & Billing (CC&B). Payments can also be paid via ACH or on-line banks, which this employee also handles.
- ◆ A Customer Care & Billing Specialist supports the Customer Care Director, Customer Service Managers, and Billing Manager.

Credit and collections are handled by the Corporate Services group. Internally they make outbound calls if an account is coming up for severance. It takes 180 days before they are sent to external bill collectors. If a customer calls whose account has been sent to an outside bill collector, the call is escalated to a Lead CSR or Customer Service Manager. Utilities, Inc. (UI) uses two collection agencies, The Affiliated Group (TAG) and CBC (Vegas).

Processes & Systems

When Schumaker & Company previously completed a management audit in 2007 involving the UI's customer service function, the company had 15 call centers and used a home-grown customer service system. Today, considerable changes have occurred.

In June 2008 UI/WSC replaced its home-grown customer service system with SPL's CC&B package; however, SPL is now owned by Oracle Corporation.

Also in 2008, UI/WSC closed approximately half of its call centers. In mid to late 2009, a committee was formed to look at further consolidating call centers and payment processing activities. The committee hoped to go to three call centers by March 2010, which they did. The resulting three call centers are as follows:

- ◆ Altamonte Springs (FL): 8-5 M-F (Eastern time)
- ◆ Charlotte (NC): 8-5 M-F (Eastern time)
- ◆ Pahrump (NV): 6-4:30 M-F (Pacific time) or 9-7:30 (Eastern time)

The company has implemented ShoreTel phones throughout Utilities, Inc. The Call Center has the ShoreTel Enterprise Call Center package. All calls come to Oak Brook (IL) and are then routed to the next available agent in Altamonte Springs (FL), Charlotte (NC), or Pahrump, NV.

The call centers use a voice over Internet protocol (VoIP) system, which routes calls to the first available agent, regardless of location. It uses skills-based routing based on responses to interactive voice response (IVR) questions to determine what kind of agent to send the call to. The difference between

CSR I and CSR II is skills and experience, which determines what types of calls they receive. Callers to the IVR can also determine their balances based on account number and zip code.

Exhibit III-2 displays the Customer Care organization’s KPI targets and results for the past two years.

**Exhibit III-2
Customer Care KPI Targets & Results
2010 to 2011**

Perspectives	Mission	Corporate Objectives	Customer Care Objectives	Measure	2010		2011	
					Target	Actual	Target	Actual
Shareholder	Fair Return	Improve Core EBITDA	O&M Budget Performance	Actual vs Target (\$MM)				
			CapEx Budget Performance (CSR Optimization)	Actual vs Target (\$MM)				
Customer	Safe, Reliable, Cost Effective Service	Improve Customer Satisfaction	Cust					
			Timely Bills	% of Bills On-Time				
			Call Handling	Speed of Answer				
			Abandoned Calls	% of Total Calls				
			Quality Monitoring	60 Scored Calls/Mo 2 calls/CSR/Mo				
			Met					
			Improve Meter Reading Accuracy	% of Late Reads				
				% of On-Time & Accurate Reads				
				% of No Reads				
				% of Estimated Reads				
% of Bad Reads								
% Billed On-Time (Customer Care)								
Employee	Safe, Challenging, Enjoyable Work Environment	Work Related Injury Rate Implement Employee Development/Performance/Recognition & Training Program (PERK Program) Reduce Turnover	Reduce Work Related Injury Rate	# of OSHA Reportable Injuries/ 100 Employees				
			Customer Service Certificate Program	Complete Certificate Program				
			Training Series	Certificate of Completion				
			Implement Tier III KPIs	Program Status				
			Educate Staff	Complete Quarterly Training Plan				
			Reduce Turnover	# of Employee Turnover/ Approved Period Headcount				

Source: Information Response 52

The items highlighted in green indicates that the target was met, while those in yellow indicate that the target was not met but was close and those in red indicate that the target was substantially not met. Only one item, % of on-time and accurate reads, was not met in 2011. However, currently approximately 99.8% of Twin Lakes are accurate compared with approximately 89.2% for UI in total.

Some items that drive the target for on-time and accurate reads companywide are weather, meter access and meter device issues.

One of the others highlighted in yellow, average speed of answer (ASA) was not met, but in looking at quarterly data, it was met from the third quarter on, just not in the first quarter.

Besides timeliness of bills, ASA, and abandoned calls, which are part of the Customer Care's performance metrics, the Customer Care Director also tracks average handling time (AHT), average wait time (AWT), maximum time in queue, and wrap-up time, which tend to improve when ASA and abandoned calls improve.

The CSRs are training on a one-on-one basis when coming into the Customer Care organization. Unlike previously, WSC has developed a formal Customer Service Training documentation, which employees use not only for training but also reference purpose. According to the Customer Care management, usually it takes three to four weeks to get a CSR up to speed.

Bill generation, specifically printing and mailing, was outsourced to Infosend in January 2011. Utilities, Inc., including Twin Lakes Utilities, Inc. (TLUI or Twin Lakes), also offers electronic bills (e-bills), which started in the fourth quarter of 2010 (approximately 6,500 customers use). The company also offers web self-service for customers to make changes to their account, starting in September 2010 using CC&B.

Regarding the Billing group within the Customer Care organization (green on organization chart) is comprised of three employees. They oversee billing schedules and cycles, oversee Infosend, implement and audit rate changes in CC&B, and do billing exception management. There's a three-day billing cycle regarding the billing calendar, with Twin Lakes probably totaling approximately two to three cycles per month. On the first day of a billing cycle, if the bill is in tolerance (high/low \$ and units), the bill is generated and sent. Approximately 92% of Twin Lakes bills are generated on the first day, which compares favorably with approximately 89% for UI in total. If not in tolerance, then it goes to the billing group (plus a few in the Call Center group) for review and resolution. The employees in the Billing group can pull up an account and create field activity from the CC&B screens for someone in the field to read the meter again, if necessary. If at the end of the third day, it is still not resolved due to a missing read, an estimate is done. They can also do an office estimate if the system does not automatically provide an estimate. Approximately 15% of Twin Lakes bills are estimated, which compares unfavorably with approximately 2.3% for UI in total. A number of meters are not readily accessible by meter readers due to their location in basements. Attempts are made to gain access by knocking on doors, leaving door tags, and requesting customers to call or email their meter read to Twin Lakes. However, if they are unable to gain access before the bill is generated, it will result in an estimated bill.

UI/WSC no longer accepts walk-in payments, although customers can still ask questions at call centers if they come in. Instead customers can pay with no fee by mail, auto draft, or electronically through their financial institution, or they may opt to pay a fee by going to a local vendors, such as Wal-Mart

(cash/debit card) or other local pay locations (cash only), to make payments. Costs typically are \$0.88 for one to two day payments or \$1.88 for next day payments.

Executive

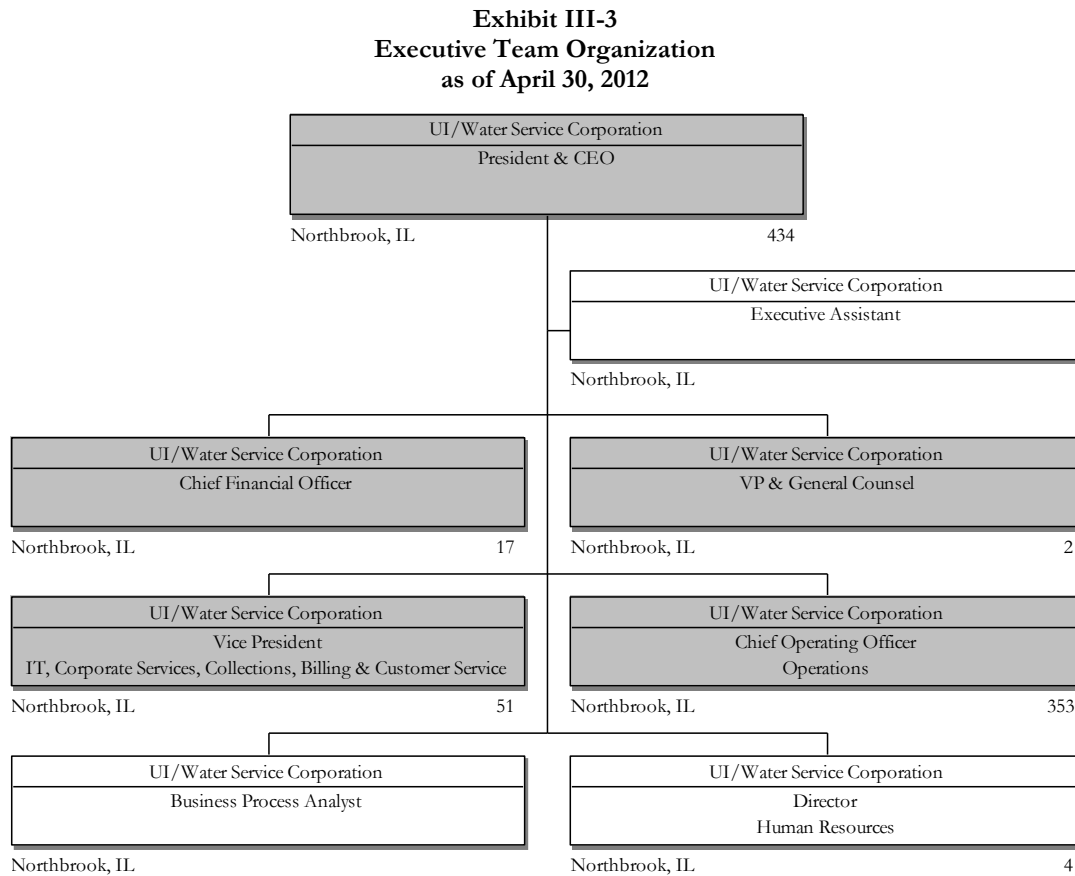
On May 14, 2005, Hydro Star, LLC, a subsidiary of AIG Highstar Capital II, L.P. and certain of its affiliates (Highstar II), entered into a stock purchase agreement to acquire 100% of the stock of Utilities, Inc. from a subsidiary of Nuon. The transaction for the purchase of Utilities, Inc. closed in early 2006. Highstar II is a group of private equity funds that invest in infrastructure related assets and businesses. Highstar II is sponsored by AIG Global Investment Group (AIGGIG). AIG Global Investment Group comprises a group of international companies that provide investment advice and market assets management products and services to clients around the world. AIGGIG member companies are subsidiaries of American International Group, Inc. (AIG). American International Group, Inc. is a leading international insurance and financial services organization, with operations in approximately 130 countries and jurisdictions. AIG's common stock is listed on the New York Stock Exchange, as well as the stock exchanges in London, Paris, Switzerland, and Tokyo.

Then recently, on February 20, 2012, it was announced by Corix Utilities, Inc. (Corix) it had entered into a definitive agreement to acquire 100% of the membership interests in Hydro Star, LLC. Corix provides water, wastewater and energy utility infrastructure solutions to communities across North America, including US and Canada. At the completion of this audit, Utilities, Inc. was still awaiting approval by regulatory commissions in various states for this acquisition.



Organization & Structure

The Executive Team is comprised of the five top employees within the Utilities, Inc. organization, as highlighted (gray) in *Exhibit III-3*.



Source: Information Response 4

Boards & Officers

Both UI and Twin Lakes have directors and officers, as follows:

- ◆ UI
 - Four directors, including the UI President and three Partners of Highstar Capital.
 - Six officers, including:
 - UI/WSC President & CEO
 - UI/WSC Vice President & COO
 - UI/WSC Vice President, CFO and Treasurer
 - UI/WSC Vice President, General Counsel & Corporate Secretary

- UI/WSC Vice President, IT, Corporate Services, Collections, Billing & Customer Service
- UI/WSC Legal Assistant & Administrative Services Manager & Assistant Secretary
- ◆ TLUI/WSC
 - Two directors, including the UI/WSC President (who is Board Chair) and Vice President, General Counsel & Corporate Secretary
 - Seven officers, including UI/WSC’s
 - UI/WSC President & CEO
 - UI/WSC Vice President & COO
 - UI/WSC Vice President, CFO and Treasurer
 - UI/WSC Vice President, General Counsel & Corporate Secretary
 - UI/WSC Vice President, IT, Corporate Services, Collections, Billing & Customer Service
 - UI/WSC Atlantic & Midwest Regional Vice President
 - UI/WSC Legal Assistant & Administrative Services Manager & Assistant Secretary

The composition of the UI Board is likely to change once Corix’s acquisition of Utilities, Inc. has been completed.

Technology Services

Technology and systems have improved significantly since we last reviewed these activities in 2007 for the South Carolina Office of Regulatory Staff (ORS). At that time, WSC was just beginning to network computers and there were no field deployment of technology, such as the Panasonic Toughbooks subsequently provided to Field Technicians for accessing CC&B functions. The mix of computer technology included both Windows and Apple technology; now WSC has standardized on Windows computers. Application systems in place were home-grown applications that had minimal capability to efficiently and effectively perform necessary tasks.

Organization & Structure

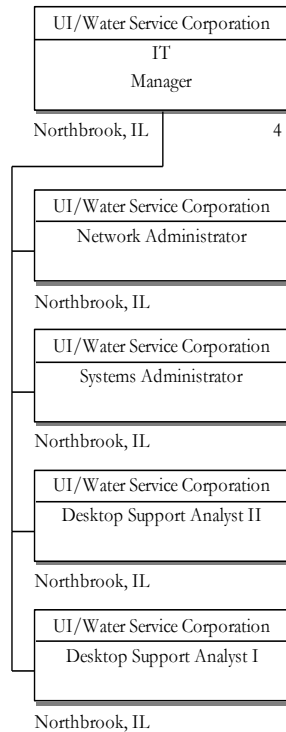
Exhibit III-4 illustrates WSC’s Information Technology (IT) organization, as follows:

- ◆ Network Administrator, who is also the primary interface with WSC’s hosting vendor for its systems and applications
- ◆ System Administrator
- ◆ Desktop Support Analysts whose function are to provide IT help desk/desktop support to employees within all UI entities

Additionally, one Oracle DB Administrator (DBA) is used approximately 25% time on a contract basis.



**Exhibit III-4
IT Organization
as of April 30, 2012**



Source: Information Response 4

Processes & Systems

The company's servers are located in a data center owned by AT&T in Oak Brook, IL. Each of UI's locations in Northbrook (IL), Charlotte (NC), Altamonte Springs (FL), and Pahrump (NV) is connected to the data center via a private Internet protocol (IP) multiprotocol label switching (MPLS) and voice switching network. The company is the sole tenant in a caged area in the data center running approximately 43 servers that are 80% virtualized. The Water Service Corporation contracted with an outside vendor (IPsoft) as its hosting vendor to do the day-to-day monitoring and backup of the server farm, whose equipment and software are owned by UI/WSC. Among the services provided to WSC are the following:

- ◆ Offsite server hosting and on-site IT support (24 x 7 x 365 availability)
- ◆ Server management services (100% outage detection guarantee for systems; 15 minutes to respond)
- ◆ CISCO 5510 firewall services
- ◆ Storage area network (SAN) management services
- ◆ Additional data center power/space

WSC is paying IPsoft approximately \$73,000 per month for lease, backup, and rental of their backup equipment. It is also paying to Oracle approximately \$205,000 per year for JD Edwards (JDE) and Customer Care & Billing (CC&B) support.

The monthly recurring charge (MRC) for these services is approximately \$61,700, plus backup charges based on the amount of storage backed up (with a sliding scale as GB increases). IPsoft's service level guarantee (SLG) provides WSC with reimbursement of their monthly service fees for any period in which IPsoft does not perform to mutually agreed-upon performance metrics, as outlined in the agreement, which include:

- ◆ *Service availability guarantee* that assures reimbursement of 1/30th of WSC's monthly basic service fees for any calendar day in which a server's availability drops below 99.9% (with exclusions for scheduled periods of maintenance or upgrades and problems with customer-provided server content and custom software).
- ◆ *Response time guarantee* that assures reimbursement of 1/30th of WSC's monthly basic service fees for any calendar month that IPsoft fails to respond (to customer requests or network events) within 15 minutes according to a designated escalation matrix.
- ◆ *Other technical/operational guarantees* include scheduled maintenance scope, network latency, and network packet delivery guarantees.

Additionally, a *satisfaction guarantee* exists that provides WSC with customer satisfaction regarding:

- ◆ Infrastructure availability
- ◆ Application updates and upgrades
- ◆ Installation/deployment of additional hardware
- ◆ Addition of storage based on expanding customer needs
- ◆ Managing the WSC environment on a 24x7 basis

Should WSC management believe that it is not completely satisfied with the service rendered by IPsoft, it has the recourse to the remedy of initiating a specified SLG credit process.

The current network environment within the UI organization is:

- ◆ Windows 2008 servers
- ◆ Windows XP on desktops and laptops with some Windows 7 deployed
- ◆ Office 2007 with Office 2010 for selected power users
- ◆ Exchange 2010, including Outlook Web Access

The company is operating on one domain with clustered servers for the JDE, CC&B, and email applications. Although the server farm is roughly 80% virtualized, the JDE and CC&B applications are not, as until just recently, Oracle did not recommend their operations in a virtualized environment.



The UI subsidiaries are migrating user workstations from desktops to laptops. All operations employees have tough book laptops and Wi-Fi hotspots, which allows them to access JDE, CC&B, SP, and Outlook while remote. The IT group uses Bomgar (an agentless product) for workstation configurations and remote support, plus the Symantec Altiris product for configuration management and support of technology assets. The group currently supports approximately 400 end user computers, plus company-issued mobile telephones. Only certain employees, primarily field personnel and upper management, have company-issued mobile telephones. UI is moving away from Blackberry telephones to Verizon using Rough Android telephones, although other employees may use their personal mobile telephones to access the company’s email system.

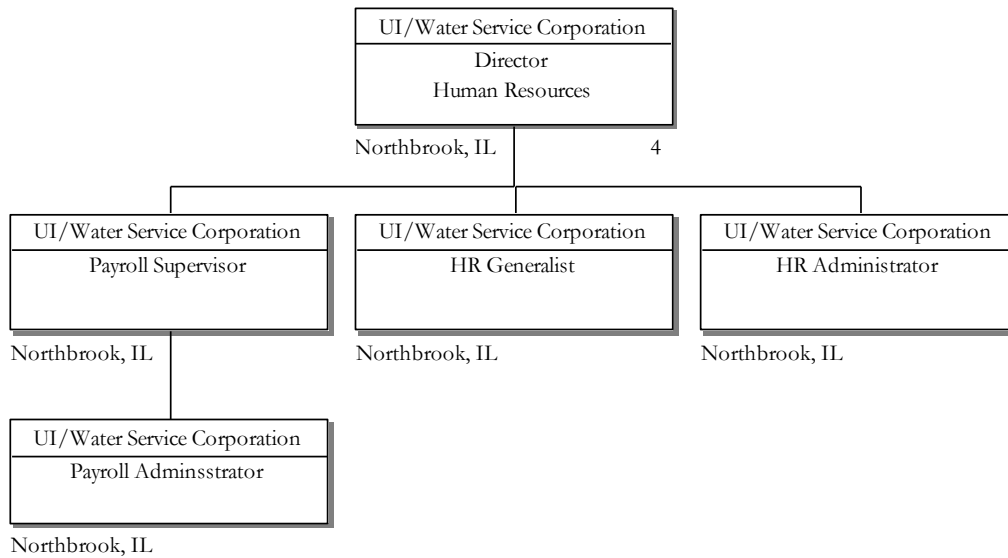
All UI employees are able to access the company’s servers when off-site using virtual private network (VPN) capability with the WatchGuard product.

Human Resources & Payroll

Organization & Structure

Exhibit III-5 illustrates the WSC Human Resources & Payroll organization, which reports directly to WSC’s Chief Executive Officer (CEO).

Exhibit III-5
Human Resources & Payroll Organization
 as of April 30, 2012



Source: Information Response 4

Processes & Systems

Substantial improvements have occurred since Schumaker & Company completed a similar management audit in 2007. Examples of changes include:

- ◆ The Director of Human Resources, who joined UI recently in 2010, spent the next eight to 12 months changing HR processes and documenting them in an Employee Manual and a separate Benefits Guide.
- ◆ When UI's SharePoint (SP) site, called the Water Main site, was launched in August 2010, an HR site was a key component. This site is designed to be a one-stop shop for employees, where employees can view and download information about benefits, payroll, management materials, etc.
- ◆ Payroll processing was moved from ADP to Paychex to implement a human resource information system (HRIS), including payroll processing. Payroll processing transferred in October 2011 with all other aspects of HRIS, including benefits, becoming operational by the end of the year 2011, including self-service options for payroll and benefits, including carrier connections if changes made, so automatically updated when an employee makes changes to his or her profile

The UI performance management system is based on an annual review by March of each year, as raises are effective April 1 of each year. Additionally, in the last two years, key performance indicators (KPIs) have expanded from Tier I (company level) to Tier II (region/department level) to Tier III (individual employee level); each focused on shareholder, customer, employee, and community topics. In February 2012, for example, the Leadership Team (Executive Team and financial, regulatory, HR representatives down to the Regional Vice President (RVP), Regional Director (RD), and Regional Manager (RM) levels, plus safety) met in FL for a few days to develop KPIs. Each month the Leadership Team has conference calls on the KPIs.

Tier III was started last summer (2011) and completed before April 2012 raises were made. There's also no longer one standard performance appraisal form throughout the UI organization, as templates now exist that have been customized for those positions where there's many individuals in the same position, such as in the Operations organization, which accounts for approximately 85% of UI's positions.

The current performance management system allows linkages to company, regional/departmental, and individual goals. An annual review rubik, as shown in *Exhibit III-6*, is provided to managers and supervisors to help them in conducting performance appraisals as a means to promote standardization and consistency across the organization. Once performance appraisals are completed by managers and supervisors, they are sent to the HR group to review them to make sure guidelines are being followed by managers and supervisors.

**Exhibit III-6
Annual Review Rubik
as of April 30, 2012**

		% OF MIDPOINT		
		Low	Mid	High
PERFORMANCE	Low	0-2%	0-1%	0%
	Mid	4-5%	2-4%	1-2% or bonus
	High	6-8%	4-5%	1-3% or bonus

Source: Information Response 67

To develop salary ranges (except Executive Team members), HR took current data in 2010 and put into spreadsheets to get midpoints for each position, then HR obtained national data and developed ranges around midpoints as follows:

- ◆ Non-exempt (hourly): $\pm 15\%$ (30% range)
- ◆ Salary: $\pm 20\%$ (40% range)
- ◆ Salary leadership: $\pm 25\%$ (50% range)

At that time the field operations pretty well aligned up, according to WSC management, but UI tried to get those below the low end to get at least to bottom through development efforts and those above the high end to get to next job title. There are currently six operations titles, such as those used for Twin Lakes staff, including (in order from top to bottom):

- ◆ Lead
- ◆ Operator II
- ◆ Field Technician III
- ◆ Operator I
- ◆ Field Technician II
- ◆ Field Technician I

Some adjustments to salary ranges were made in 2011, although WSC management expects to review each range every three years. Additionally, market evaluations were made by using organizations such as O*NET Occupational Information Network, Guerilla Market Research, and Robert Half to validate information. UI also looked at American Water Works Association (AWWA) surveys for water and wastewater utilities based on size (# customers, # gallons water, etc.).

All employees are subject to performance based company contribution factors for compensation, such as EBITDA and KPI performance; for example last year, although UI made its EBITDA target, it only made 85% to 90% of its KPIs, so only 6.5%, not 7.5%, of 401k matching was made.

Individual regions and companies are generally responsible for recruitment activities; however, the HR organization assists them by providing the following:

- ◆ Applicant tracking on website
- ◆ Onboarding
- ◆ Formal contingent offer letter developed by HR and headcount approvals reviewed
- ◆ Formal background checks, including criminal, references, and drivers data, by Background Online company
- ◆ Pre-employment drug screening plus random drug screening by Qwest
- ◆ e-Verify

The HR organization is in the planning stages of developing a “Be a Better Manager” program. However, no training and development (T&D) coordination is done by HR staff; as it is generally done in the field because licensing and certification occurs on a state-by-state basis. WSC management indicates that UI promotes certification and training through use of tuition reimbursement and certification bonuses. *Exhibit III-7* illustrates certification bonuses paid in Indiana.

Exhibit III-7
Indiana Certification Bonuses
as of April 30, 2012

State	\$125.00	\$350.00	\$500.00	\$600.00
IN	Class 1	Class 2	Class IIIBD/ Class IIIA	Class 4
IN	Class DS & WT1	Class DSL & WT2	Class WT3	Class AT

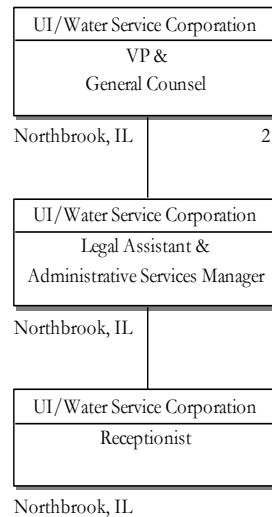
Source: Information Response 70

Legal/Risk Management/Administration

Organization & Structure

Exhibit III-8 illustrates the Legal & Operations Administration organization.

Exhibit III-8
Legal & Operations Administration Organization
as of April 30, 2012



Source: Information Response 4

The executive heading this organization is UI's VP & General Counsel, who is responsible for UI's legal services, including coordination of any external counsel firms. Regarding Twin Lakes, external counsel firms have assisted the company with issues such as union organization, personnel, environmental citation, rate cases, litigation, etc. Two legal matters are currently active:

- ◆ Twin Lakes is a defendant in a case brought by R&M Construction regarding location of lines with regard to easements.
- ◆ Twin Lakes is also a defendant in a case brought by a Twin Lakes resident in a personal injury case, although no trial date has been set at this time.

The employee reporting to the VP & General Counsel is the Administrative Services Manager responsible for handling:

- ◆ Facilities (landscaping, etc.) for Northbrook office only
- ◆ Coordination with insurance carriers regarding property and casualty insurance
- ◆ Receptionist/mail room (incoming mail, bill mailing, etc., plus backup for Receptionist, etc.)
- ◆ Corporate upkeep, such as paperwork/filings

UI owns the Northbrook office building, but UI both owns and leases local offices. Due to crowded conditions at Northbrook, in 2007 the Director of Administrative Services was responsible for looking for new office space in the Northbrook area, as it hoped to move by 2007 year-end. The company did not move then, as alternatives were too costly and space constraints were relieved once the ERP systems were implemented and outside consultants left. UI has no immediate plans to move at this time.

Processes & Systems

This group uses the same major systems that other UI/WSC groups do, especially the JDE, email, and Microsoft Office applications.

B. Findings & Conclusions

Customer Service

Finding III-1 **No customer satisfaction survey are being done in Indiana to help WSC in determining how it can improve service.**

No customer satisfaction surveys are done for customers of the Twin Lakes utility organization. In fact the only customer satisfaction surveys done by WSC recently started in South Carolina, but have not been expanded yet. The company's ShoreTel system allows a three question survey at the end of a call, but WSC also has not moved forward on using it yet.

Finding III-2 **The call center agent quality monitoring program is appropriately used, but does not include viewing of video or screen captures when scoring a CSR's activity.**

Each CSR is monitored on a minimum of two random calls in each month. Reviewers use a prescribed agent quality monitoring procedures checklist to score each CSR based on greeting, soft skills, analytical/strategic thinking, and closing. Reviewer #1, who is typically the Lead CSR, Customer Service Trainer, Customer Care Manager (CCM), or Customer Service Manager (CSM) records the call (using the company's ShoreTel telephone system) and completes the evaluation form. If the score is at or above the target score of 95, only one score will be reported for the call. Conversely, if the score achieved is below the target score of 95, Reviewer #1 forwards the evaluation form and call recording to the CCM or CSM. Reviewer #2 (CCM or CSM) evaluates the recorded call, completes the evaluation form, and calculates the total quality monitoring percentage by averaging the two scores. On a minimum of a quarterly basis, the CCM/CSM will meet with the CSR to discuss their results and provide coaching, as necessary; obtain CSR signature and CCM/CSM signature; and retain in the CSR's local personnel file. The overall department percentage is recorded on the Customer Care Tier II.5 KPI, with individual CSR scores recorded on the CSR's Tier III KPI.



Video or screen captures of CSR using UI's systems during calls are currently not available for reviewers to see, although the Customer Care Director indicates that they might consider this at some time in the future. By having video or screen captures, reviewers can not only hear what CSRs say (as they do now), but also determine if CSRs are most efficiently using systems during calls.⁶⁷

Finding III-3 The number of Twin Lakes complaints have been declining since a high in 2010.

Exhibit III-9 displays the number of complaints by type and by year from 2008 to 2012 (June year-to-date), which shows that complaints have been declining since a high in 2010. In 2010 the largest number of complaints was in the billing and bankruptcy write-off categories, which are likely explained by the country's economic situation at the time.

**Exhibit III-9
Customer Complaints
2008 to 2012 (June Year to Date)**

Commission Complaints	2008	2009	2010	2011	2012
Customer Service Complaint	1	0	0	1	0
Discolored Water	0	0	0	1	0
Billing Complaint	0	2	6	0	2
Lawn Repair	0	0	0	1	0
Sewer Back Up	0	1	0	1	2
Water Pressure	0	0	1	0	0
Water Quality	0	0	4	2	0
SUB-TOTAL	1	3	11	6	4

Better Business Bureau Complaints	2008	2009	2010	2011	2012
Sewer Back-Up	0	0	0	0	1
SUB-TOTAL	0	0	0	0	1

Bankruptcies	2008	2009	2010	2011	2012
Bankruptcy Write-Off	0	2	6	1	0
SUB-TOTAL	0	2	6	1	0

TOTAL	1	5	17	7	5
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Source: Information Response 93

Executive

Finding III-4 UI's strategic plan is notably focused on meeting various key performance indicators.

Strategic planning did not exist with the UI/WSC organization when Schumaker & Company previously performed a prior audit in 2007. Since then, the company has evolved to using Tier I (company level), Tier II (region/department level), and Tier III (individual employee level) for developing KPIs, which

are the basis for implementing its strategic plan. *Exhibit III-10* displays the 2011 and 2012 key performance indicators (KPIs) for the corporate UI organization (previously discussed as TEIR I KPIs in the *Human Resources & Payroll* background section of this report).

Exhibit III-10
2012 Corporate TEIR I KPIs
as of April 30, 2012

Perspectives	Mission	Objectives	Measure	2011 Actual	2012 Target
Shareholder	Fair Return	Meet Core EBITDA Plan	Dollars (\$MM)	[REDACTED]	[REDACTED]
		Meet Budget Δ in UI Cash Flow Plan	Net Δ in UI Cash Flow vs. Budget (\$MM)		
		Increase ROE	ROE % (TTM)		
		Meet Rate Case Plan	% of Filed Rate Cases in Accordance to Plan		
Customer	Safe, Reliable, Cost Effective Service	Timely and Accurate Billing	% Billed On-Time	[REDACTED]	[REDACTED]
			% of Accurate Bills		
		Field Activities Completed On Time	% Completed by Due Date		
		Proper & Timely Resolution of Customer Issues	# of Unreported & Unresolved Significant Issues		
Employee	Safe, Challenging, Enjoyable Work Environment	Reduce Work Related Injury Rate	# of OSHA Lost-Time Injuries / 100 Employees	[REDACTED]	[REDACTED]
		Complete Facility Inspections	% of Inspections with all Deficiencies Corrected		
		Employee Survey Participation	% of Employee Participation		
Community	Act with Integrity, Protect the Environment and Enhance the Community	Maintain & Improve Compliance	% of System Days in Compliance	[REDACTED]	[REDACTED]
			% of Systems in Compliance or on Compliance Plan		
		Community Participation	% of Employee Participation		

Source: Information Response 71

Although the 2012 KPIs are substantially the same as 2011, some changes noted by UI management include the following:

- ◆ *Addition of “Meet Rate Case Plan” target* – UI management believes that meeting the rate case plan is a very early indicator of its ability to meet our revenue forecasts both this year and next. If UI misses meeting the rate case plan, it is destined to miss our revenue targets both in the short

and medium term. It is a Tier I goal because almost all parts of the organization have some input into rate cases (e.g. regulatory accounting files the cases, operations provides input to the filings, accounts payable must have orderly invoices and correct accounting treatment to attach to filings, etc.).

- ◆ *Addition of “Proper & Timely Resolution of Customer Issues” target* – UI added a measure around not reporting unresolved customer issues of significance, which will be a subjective assessment each month, as determined by the Executive Team. The idea is that while UI can and do perform very well in total, sometimes the denominator is so large that one issue can get lost in the shuffle but actually be very costly to the company. The goal here is to make sure senior management is aware of significant issues.
- ◆ *Deletion of “Reduce MVA Rate” target at Tier I level* - We eliminated the moving vehicle accident (MVA) goal from Tier I and moved it to Operations Tier II goals for two reasons. First – by far, the vast majority of miles are driven in Operations and thus Operations has the most ability to affect it. Second, it actually is a support goal to UI's broader goal of ensuring employee safety. Its removal in no way means that UI is less committed to vehicle safety, but rather that UI is going to focus specific actions in specific areas that can better impact the MVA result.
- ◆ *Replacement of the “Employee Survey Result Goal” with an “Employee Survey Participation Goal” target* – UI management believes that the 2011 goal might be somewhat self-serving in that it could potentially incentivize people to provide artificially positive responses. UI management indicates that it does not want to either incentivize or penalize any specific responses, but rather want an engaged workforce to be a part of creating the environment employees want, which requires open communication from everyone. So the goal has been shifted to focus on increasing participation versus what that participation actually says. (UI management also indicates that it will continue to work towards improving the results though.)
- ◆ *Replacement of “OSHA Reportables” with “OSHA Lost Time Injuries” target* – UI's results were a bit muddled by the fact that the company often has uncontrolled reportables of little impact (e.g. a bee sting); therefore, UI has chosen “OSHA Lost Time Injuries” to refocus its efforts on making sure employees go home safely each and every day. Seeing the core data versus data clouded with other things will allow the company to focus action items in the correct place.
- ◆ *“Community Participation Goal”* has shifted from development of a program to implementation, with setting a goal for this year of 25% of employees participating.

**Exhibit III-11
Corporate KPIs
2009 to 2011
as of April 30, 2012**

Perspectives	Mission	Objectives	Measure	2009		2010		2011		
				Target	Actual	Target	Actual	Target	Actual	
Shareholder	Fair Return	Improve EBITDA	Improve Core EBITDA Revised Margin	Core EBITDA Margin (%)						
			Improve Core EBITDA Revised Budget	Dollars (millions)/Quarter						
			Meet CIAC Revised Budget	Dollars (millions)/Quarter						
				Meet Core EBITDA Plan	Dollars (millions)/Quarter					
				Meet Debt Plan	Dollars (millions)/Quarter					
				Meet Budget ▲ in UI Cash Flow Plan	Dollars (millions)/Quarter					
				Increase ROE	ROE %					
Customer	Safe, Reliable, Cost Effective Service	Improve Customer Satisfaction	Timely & Accurate Bills	% Billed On-Time and Not Re-Billed						
				% Billed On-Time						
				% Bills with Accurate Rate						
				Service Orders Completed On-Time	% of Service Orders Completed by Due Date					
Employee	Safe, Challenging, Enjoyable Work Environment	Reduce MVA Rate		# of MVAs/ 1,000,000 miles						
				# of On-Road MVAs/ 1,000,000 miles						
				# of Off-Road MVAs						
				Reduce Work Related Injury Rate	# of OSHA Reportable Injuries/ 100 Employees					
				Implement Employee Development/Performance/Recognition & Training (DPRT) Program	Program Status					
				Employee Satisfaction	10% Improvement in Employee Satisfaction Rate					
		Reduce Turnover (Annualized)	Turnover Rate							
Community	Act with Integrity, Protect the Environment, and Enhance the Community	Maintain & Improve Compliance		% Systems in Compliance						
				% of Systems in Compliance or on a Compliance Plan						
				Implement Community Participation Program	100% Program Implementation					

Source: Information Response 47



Finding III-5 The UI and Twin Lakes boards play a limited role.

There is no specific calendar for UI's Board of Directors (BOD) meetings, but the dates for formal meetings in the last three years were March 4, 2009, December 17, 2009, and December 7, 2010. Also, there is no specific agenda provided for UI's BOD meetings, slide presentations are typically made and meeting minutes kept. According to UI management; however, the Executive Team (comprised of most of UI's officers) meets frequently and handles most of the decisions regarding UI operations. In the same time frame, approximately 21 informal BOD meetings or conference calls were conducted. Additionally there was no indication of formal Twin Lakes BOD meetings.

As previously, there was no indication of the existence of any Board committees, such as an audit committee, finance committee, compensation committee, etc. In short, because Utilities, Inc. is privately held, the existence of the Board is more for "legal" purposes (all corporations are required to have Board and hold meetings whether public or private in nature) than actual governance and oversight of Utilities, Inc. As a privately-held utility, many of the expectations that might be expected of a utility Board do not exist – in particular compliance with Sarbanes Oxley requirements, Security and Exchange Commission requirements, inclusion of outside directors, etc. Although these requirements might apply at the parent company level, if it was publicly-traded parent, they would not necessarily be implemented at the wholly-owned subsidiary level.

Finding III-6 The UI organization does not maintain a stand-alone ethics policy, although policies that are ethics-related are included in the UI employee manual.

The UI employee manual, which contains policies that are ethics-related, applies to all operating companies, including Twin Lakes. Ethics is not specifically mentioned in the manual; however, its "Other Policies/Definitions" section contains various topics, such as confidential information, conflict of interest/outside employment, compliance, equal employment opportunity, harassment policy, hotline, etc. Unlike other utility organizations does not have a centralized position that focuses on ethics, including training of employees.

Technology Services

Finding III-7 Although the company has made extensive strides in its technology over the past five years, no formal disaster recovery or business continuity plans are currently in place, which would make ongoing operations difficult if a major disaster event were to make the data center inoperable.

Although the company's data on its servers are routinely backed up to tape, the IT group has no second facility to bring up its data in the event of a major disaster event, such as a tornado, were to make the data center inoperable. Due to the company's heavy reliance on technology, as is the case with most utility organizations today, the inability to access its data would cause severe operational problems. Specifically, Twin Lakes employees rely on their ability to access JDE and CC&B data via their laptops.

If the data center were inoperable, thereby making JDE & CC&B unavailable, Twin Lakes employees would find it extremely difficult to do their daily jobs.

Finding III-8 Insufficient emphasis on training IT staff exists.

Although some of the IT staff, specifically the network and system administrators, have some form of IT certification (A+, Network+, Microsoft Certified Technology Specialist (MCTS), Microsoft Certified IT Professional (MCIPT) – Servers or Enterprise Administration, Microsoft Certified Systems Administrator (MCSA), for example), when asked to provide a listing of training by IT staff in the past three years, IT management indicated that no formal recordkeeping for training exists. Because of the nature of the various trainings, some have been funded by the company, but most have been self-funded and there is no formal policy to require proof of training or certification.

Human Resources & Payroll

Finding III-9 Executive compensation levels are not clearly defined or documented, nor are they based on formal comparative analyses.

As in 2007 when we completed a similar audit, salary ranges existed for all positions except UI's five Executive Team members. At UI use of the terminology "executive compensation" refers only to the UI Executive Team, who is paid both salaries and incentives/bonuses. They include:

- ◆ President & CEO
- ◆ Chief Financial Officer
- ◆ Vice President & General Counsel
- ◆ Vice President (IT, Corporate Services, Collections, Billing & Customer)
- ◆ Chief Operating Officer

No salary ranges currently exist for these executive positions. At year-end the President and the UI Board Chair determine salaries for executive employees, with input from the HR organization. The Board in turn determines the President's salary.

Finding III-10 No centralized HR monitoring of training and development is presently occurring.

Although licensing and certification occurs on a state-by-state basis for Operations staff, the HR organization should be responsible for ensuring that training and development activities for all WSC employees is being performed appropriately throughout the organization, whether at its headquarters in Northbrook or other Operations locations. The HR organization, along with headquarters and operations management, should investigate database software packages that would be implemented centrally, but would allow each WSC department to easily input, track, and report employee training and development activities. It would also allow the HR organization to monitor activities to ensure that appropriate training and development activities are being conducted.



Legal/Risk Management/Administration

Finding III-11 UI's risk management program is primarily insurance focused.

The UI/WSC organization uses a comprehensive insurance program to mitigate the various elements of risk within its scope of business activities. Specifically, it maintains coverage on the following areas of business risk:

- ◆ General liability
- ◆ Property and casualty
- ◆ Worker's compensation
- ◆ Pollution
- ◆ Auto
- ◆ Storage tank
- ◆ Directors and officers (DEO)

In addition to these specifically identified coverages, the company also maintains umbrella and excess policies as a manner of ensuring completeness in its risk management program. Each year, as part of the annual renewal process, the company reviews its risk profile and makes adjustments, as necessary, to the risk management program. Also, from an employee health care perspective, the company purchases stop-loss coverage, which effectively limits the overall exposure related to any single health care claim.

However, the company does not maintain a fully-fledged comprehensive enterprise risk management (ERM) program, which formally identifies key risks and develops action plans for addressing each risk. Many utility organizations, at least annually, have its management review and update its risks and action plans, often as part of its strategic planning process.

C. Recommendations

Customer Service

Recommendation III-1 Incorporate regularly-scheduled customer satisfaction surveys as part of the Customer Care organization's activities. (Refer to Finding III-1)

The use of regularly conducted customer satisfaction surveys can provide a customer service organization with insightful information about the services it provides and how client groups perceive the organization. The use of such surveys is particularly helpful when looking at trends over time to determine whether service is improving or not. The Customer Care organization should develop a plan to conduct customer satisfaction surveys and implement it in a timely manner. Use of such surveys would give the Director a baseline from which to show progress. Subsequently, surveys should be routinely conducted.

Recommendation III-2 Enhance the call center’s quality monitoring program to include video or screen captures of CSRs activities while monitoring is occurring. (Refer to Finding III-2)

In some customer service organizations management has implemented software that allows reviewers to not only record calls, but also provides digital recording, capture, and storage of video showing a CSR’s interactions with customers. Use of both audio and visual recordings enables supervisors to provide specific feedback to customer service representatives. Such a system provides enhanced quality monitoring and sophisticated interaction analytics that allow management to better understand and strengthen customer relationships.

Executive

Recommendation III-3 Formalize the role of the UI and Twin Lakes boards once the Corix acquisition of Utilities, Inc. has been completed. (Refer to Finding III-5)

Both UI and Twin Lakes boards should have regularly-scheduled formal meetings with agendas and minutes to provide a proper record of activities undertaken. Implementation of such regularly-scheduled meetings should be done in concert with Corix’s corporate governance expectations for its subsidiaries.

Recommendation III-4 Develop a code of ethics, train all employees, including Twin Lakes employees, on its content, and require them to annually acknowledge and accept its requirements. (Refer to Finding III-6)

Other utilities have become more focused in addressing adherence to a company’s ethics policy, including establishment of a stand-alone policy and annual acknowledgement of the policy by all board members and employees. A formal code of ethics should be developed for UI, Twin Lakes, and each of their boards that fully describe the company’s ethics policies and management’s expectations for complying with each element. All employees should be trained, plus refresher courses developed, as appropriate. Finally, each employee should be required to formally acknowledge and accept the requirements of the code of ethics.



Technology Services

Recommendation III-5 Implement formal disaster recovery and business continuity plans. (Refer to Finding III-7)

As WSC's IT group is currently working on refreshing the data center servers (all four to five years old) by moving to a new data center and installing new equipment while the existing equipment remains operational until a cutover can occur, it is the appropriate time to resolve the lack of these plans before a disaster occurs.

Recommendation III-6 Place more emphasis on IT training and formally maintain records of training activities. (Refer to Finding III-8)

Especially given the ever-changing nature of today's technology, it is essential that IT employees frequently receive professional development and training activities to properly support the company's technology. Each IT employee should have such activities included as part of his performance plan, which should then be monitored and tracked to ensure compliance.

Human Resources & Payroll

Recommendation III-7 Regularly perform studies to identify appropriate executive pay levels. (Refer to Finding III-9)

More formalization, including defined salary ranges and incentive/bonus plans, should be developed so that executives know what compensation to expect given their performance. Formal performance reviews should be conducted for executive employees to give feedback as to their performance. Individual incentive/bonus plans should be developed that incorporate specific goals that an executive is targeted to achieve. These plans should be set before the year begins. Additionally, the pay ranges (salaries and incentives/bonuses) for executives should be based on formal comparative analysis to ensure that ratepayers are not being impacted by pay levels that are too high.

Recommendation III-8 Have the Human Resources organization in Northbrook monitor training and development activities throughout the WSC organization. (Refer to Finding III-10)

The HR organization should be responsible for ensuring that training and development activities for all WSC employees is being performed appropriately throughout the organization, whether at its headquarters in Northbrook or other Operations locations. That's not to say that the local companies would not be involved, but HR needs to ensure that training and development is being done for all employees require it, whether due to licensing and certification requirements, or because an employee's performance plan includes it.

Legal/Risk Management/Administration

Recommendation III-9 Establish a formal comprehensive ERM program. (Refer to Finding III-11)

Enterprise risk management has been defined as a process, brought about by an entity's Board of Directors, management, and other personnel, which is designed to identify potential events that may affect the entity and manage risks to be within the company's risk appetite, so as to provide reasonable assurance regarding the achievement of the entity's objectives." Developing an inventory list of risks is a beginning, but that strategy alone does not constitute an ERM program. A utility organization must dedicate the time and resources to formalize its ERM policies, processes, and practices such that the endeavor is an ongoing and regularly scheduled set of program activities. For ERM to create value, it must be embedded in and connected directly to the company's strategic planning efforts. As UI management evaluates strategic alternatives that are designed to reach its performance goals, it must also include related risks across each alternative in that evaluation process. Doing so will allow UI to determine whether the potential returns are commensurate with the associated risk that each alternative brings—and to ensure that risks it takes are within its stakeholders' appetite for risk.

UI should develop a detailed plan for taking the next steps in fully developing its ERM program. Among the formal activities that utility organizations often take in an ERM program include documenting the following:

- ◆ Risks
 - Type of risk (financial, operational, structural, other) and assessment if risk exists
 - Quantification
 - Qualification (probability)
 - Priority
- ◆ Responsible individuals
- ◆ Responsibilities/action plans
- ◆ Resultant practices

Once a risk inventory has been developed, the next phase is to set goals and formalize action plans, after which a senior management employee, such as the VP & General Counsel, monitors these plans on a monthly basis.

By focusing on key uncertainties—either risks or opportunities—and factoring them into business plans, management can be better prepared to achieve its business objectives. The goal is to maximize the potential for gain and minimize the potential for loss associated with uncertain events. Many utility organizations use a bottom-up ERM process, which starts with local units developing their key top risks. This information is then provided to the regional organizations, which follow a similar process. A regional Risk Operations Management Committee (ROMC) meets approximately two to four times annually and is composed of a cross-section of individuals from all region functions. Finally, the ERM



process reaches the company level, where another series of analyses and reports occurs. At that level, a Risk Management Committee (RMC) comprised of all major UI functions is involved, which also meets two to four times annually.

IV. Financial Management & Structure

This task area analyzes financial management and structure as follows:

- ◆ Financial management and organization
- ◆ Financial systems
- ◆ Budget process evaluation
 - Capital
 - O&M
 - Position (employee)
- ◆ Cost trends analyses

A. Background & Perspective

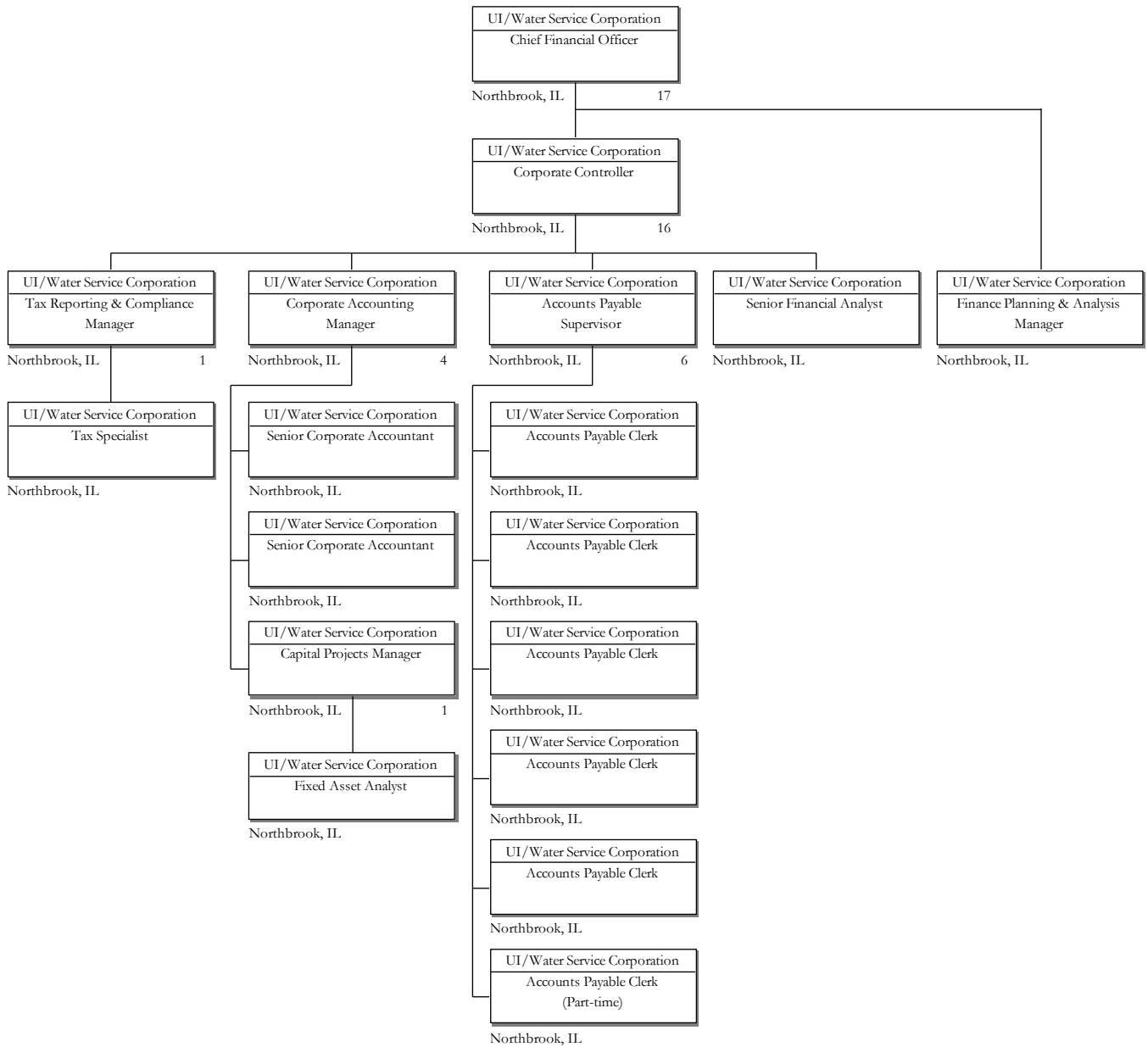
Financial Management Organization

Financial Management and Organization		
Typical Work Steps	Information Required	Key Indicators
Review organization structure. Assess if financial management organization adequately supports Twin Lakes organization.	Organization chart with all approved positions, the incumbent (or vacancy noted), title, and physical location Job descriptions Tabular listing of all positions showing reporting and supervisory relationships	Clearly articulated organization structure exists. Effective position control system is in place. Appropriate balance of centralization and decentralization exists.
Identify mission and functions.	Mission statement Functions of each sub-unit	Clear and appropriate mission statement exists. Well defined functions are consistent with the mission.
Determine the workforce strategy – employee and contractor mix.	Division of labor between employees and contractors – what types of work are assigned to each List of core competencies Collective bargaining agreements Rationale and economics for the work division between employees and contractors	Core competencies are identified and protected. Employee vs. contractor decisions are economically sound. Clear role definitions and deployment flexibility. Staffing trends are favorable.

The Utilities, Inc. (UI) organization has a service company, Water Service Corporation (WSC), in Northbrook, IL, which is responsible for shared support services, including financial management, functions, provided to its subsidiaries, including Twin Lakes Utilities (Twin Lakes). The financial management functions are included within the Accounting & Finance group, as shown in, reporting to the Chief Financial Officer (CFO).



**Exhibit IV-1
Accounting & Finance Organization
as of April 30, 2012**



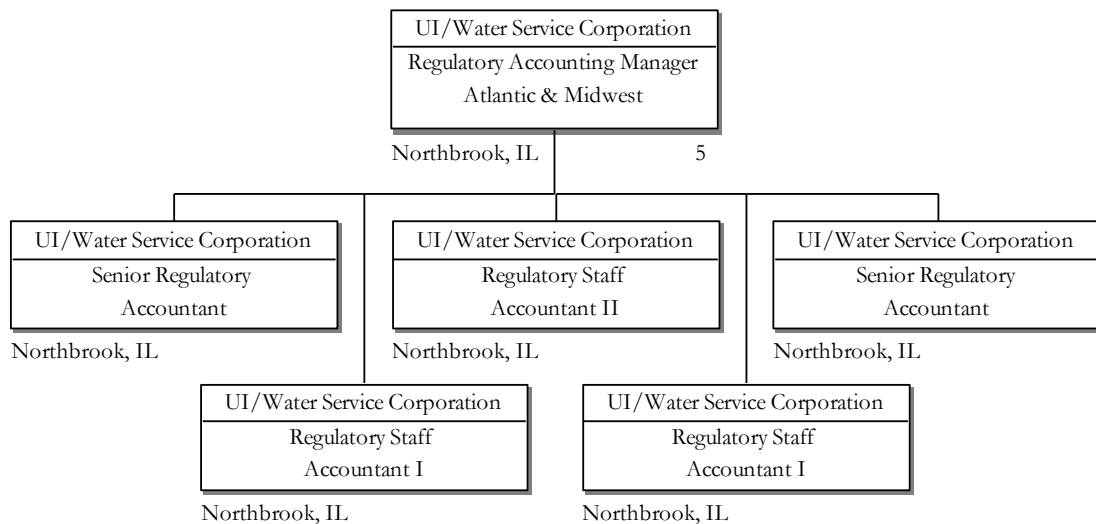
Source: Information Response 4

Other financial management functions, specifically regulatory accounting activities, are provided by the Regulatory Accounting-Midwest & Atlantic organization, as shown in *Exhibit IV-2*. (Other Regulatory Accounting groups are responsible for other UI regions.) This group, which is responsible for Midwest (IL, IN, KY, and TN) and Atlantic (NC, VA, MD, PA, and NJ) regions, report to the Atlantic & Midwest Regional Vice President (RVP), which is part of UI's Operations organization reporting to the

Chief Operating Officer (COO). Among the regulated accounting activities performed by this group for UI entities, such as Twin Lakes, are:

- ◆ Rate cases
- ◆ Limited proceedings
- ◆ Certification of service
- ◆ Commission ordered adjustments
- ◆ Assistance to the Operations organization for development of rate case budgets
- ◆ Other activities, such as monitoring management audits, as necessary

**Exhibit IV-2
Regulatory Accounting Organization
as of April 30, 2012**



Source: Information Response 4

Each of the three most senior staff (two Senior Regulatory Accountants and one Regulatory Staff Accountant II) is assigned responsibility for specific states. Among the responsibilities of one of the Senior Regulatory Accountants are activities involving all three Indiana utilities, including Twin Lakes. The timing of rate cases is based on a rate case plan developed by the Regional Vice Presidents (RVP), the Executive Director of Regulatory Accounting (also part of the COO’s organization), and other WSC executives. Outside legal counsel in Indiana (Barnes Thornburg) assists this group in regulatory activities.

The Regional Finance Managers (RFMs) are not part of the Accounting & Finance organization, but report to the two WSC Regional Vice Presidents (RVPs). The RFMs assist the RVPs and Regional Directors (RDs) with budgeting and reporting activities. For example, the Regional Finance Manager serving the Atlantic & Midwest areas is involved annually with the O&M and capital budget development and preparation processes, plus tracking actuals against budget on a monthly basis. She is

also involved in providing ad-hoc reports, when requested. Monthly variance reports are provided to regional staff by state, although they can also drill down o company level, if desired.

Other financial management functions, specifically customer billing and collections, are provided by the IT, Corporate Services, Collections, Billing & Customer organization, which is discussed in detail in *Chapter III – Customer Services and Key Support Units*.

Financial Processes & Systems

Financial processes and systems have improved significantly since we last reviewed these activities in 2007 for the South Carolina Office of Regulatory Staff (ORS). At that time, many financial functions were being performed in the field without centralized controls at WSC in Northbrook, and the systems in place were home-grown applications that had minimal capability to efficiently and effectively perform necessary tasks, including, for example, (a) matching of purchase orders, receipts, and invoices, or (b) WSC direct charges and allocations to UI subsidiaries. Additionally forecasting models were previously not used.

Financial Processes

Most Accounting & Finance functions, such as general ledger (G/L)/monthly close (including allocations), accounts payable (A/P), capital projects, tax, and financial planning and analysis are centralized within the WSC Accounting & Finance organization.

General Ledger/Monthly Close/Allocations

Utilities, Inc. closes its books by the 10th business day of the month following the closed month, with the Corporate Accounting group doing all the journal entries and close activities as follows:

- ◆ By the fifth business day, a preliminary close is made.
- ◆ By the seventh business day, calls are made to the field, including Regional Vice Presidents, Regional Directors, Business Managers, Regional Finance Managers, and Analysts to discuss close.
- ◆ By the eighth business day, the books are finalized.
- ◆ By the ninth business day, the monthly reports are reviewed.
- ◆ By the tenth business day, the monthly reports are issued in consolidated and regional form both upwards and downwards in the organization.

The Corporate Accounting group also coordinates development of April 30 filing materials with the Indiana Utility Regulatory Commission (IURC), although the Regulatory Accounting group, in conjunction with outside counsel, does the filing. WSC employees are encouraged to direct charge their time to affiliates, whenever possible; however, any remaining costs are allocated. Specifically, as part of

the monthly close process, cost allocations from WSC to affiliates are made, with the following key business rules:

- ◆ All allocations are based on equivalent residential connections (ERCs) (one for each water connection and one for each wastewater connection) for active customers, in which the main types of allocations are:
 - Salaries and benefits, in which the Salary and Benefit Allocation (SE50) – also known as an employee’s profile – is supposed to be updated quarterly, if needed.
 - Expenses among common business units, WSC company, states, and regions
 - Common business units allocated between water and wastewater.
 - State and regional O&M expenses.
 - Rate base allocations.
- ◆ The number of connections is based on the size of meter, with a 5/8 inch meter equivalent to one.
- ◆ Majority of allocation jobs are updated on a monthly basis, with the ERC number changing monthly.

The use of ERC figures, rather than the 11 codes used previously before JDE was implemented, has simplified the process for WSC to perform allocations. All the Corporate Accounting Manager must do each month is run computer jobs and review the reports to make sure all costs have been allocated, as WSC is a zero \$ entity. In some cases, individual utility employees may divide their time among multiple companies. For example, some operations staff at Twin Lakes may spend a portion of their time working on UI’s other two Indiana utilities. To divide their time, an employee profile is developed annually (and reviewed quarterly) showing how time is split between companies. In those cases costs are solely allocated with no direct charges impacting how costs are spread among companies.

Accounts Payable

There are five full-time (FT) A/P clerks reporting to the A/P Supervisor and one part-time (PT) A/P clerk who is responsible for scanning invoices and uploading them to the JDE system. At this time, UI is doing a backfile conversion back to 2010, although current invoices are scanned as received, so field staff can view them.

The A/P processing of invoices has completely changed since Schumaker & Company performed a management audit involving WSC in 2007. Now, all invoices are supposed to go directly to A/P in Northbrook, IL, rather than sent to remote offices. When UI implemented JDE, A/P sent out letters to all vendors requesting a change of address for submitting invoices.



Exhibit IV-3 illustrates UI's delegation of authority regarding purchasing authority.

Exhibit IV-3
General Delegation of Authority Limits
as of April 30, 2012

	Project Purchase Orders				Non-Project Purchase Orders			
	Master Project Excluding IT Projects		Fully Approved Projects		Other Than IT Purchases		IT Purchases	
	Dollar Limit	Approval Authority	Dollar Limit	Approval Authority	Dollar Limit	Approval Authority	Dollar Limit	Approval Authority
Operations	\$25,000	RM/PM	\$100,000	RM/PM	\$250	Op/Lead Op	\$250	Op/Lead Op
	\$100,000	RD	\$250,000	RD	\$1,000	AM	\$500	AM
	\$500,000	RVP	> \$250,000	RVP	\$25,000	RM/PM	\$1,000	RM/PM
	\$1,000,000	COO			\$100,000	RD	\$5,000	RD
	>\$1,000,000	PCEO			\$500,000	RVP	\$10,000	RVP
					\$1,000,000	COO	\$25,000	COO
					> \$1,000,000	PCEO	> \$25,000	PCEO
All Other Departments	\$5,000	CM	\$10,000	DD	\$5,000	CM	\$500	CM
	\$25,000	DD	> \$100,000	ETM	\$25,000	DD	\$1,000	DD
	\$500,000	ET			\$75,000	Customer Care/IT Mgt	\$25,000	ETM
	> \$500,000	PCEO			\$500,000	ETM	> \$25,000	PCEO
					> \$500,000	PCEO		

Source: Information Response 78

CM=Corporate Manager

DD=Department Director

Op=Operator

AM=Area Manager

RM=Regional Manager

PM=Project Manager

RD=Regional Director

RVP=Regional Vice President

COO=Chief Operating Officer

ETM=Executive Team member

P/CEO=President & Chief Executive Officer

Other specific limits have also been developed for non-purchase orders > \$250, contracts, and commitments, such as legal invoices, environmental and regulatory settlements, insurance, contract/consulting/temporary labor, accounting, contracts associated with purchases, routine operations and maintenance billings, and recurring payments.

Procurement, however, is still done locally in field; in which local managers get quotes, develop a purchase orders (POs) with associated accounting codes, and inputs the POs to JDE. A PO (for purchases \$250 and above) is given to a vendor, then the local manager must receipt the item into JDE when appropriate. Now there's a three-way match between PO, receipt, and invoice before payment can be made.

Every Wednesday, Accounts Payable runs a cash requirements report listing all A/P invoices and their due dates. The Director of Corporate Accounting receives this report, indicates a date to pay up through (typically 5 business days out), and reviews the report for large dollar amounts and unusual vendors. A check run is initiated, typically on Thursdays, in which checks are run on pre-numbered check stock. A log of check numbers is maintained for control purposes. After processing, printed checks are run through the check signer (using CFO signature). All checks \$3,000 and above must be additionally signed by the Senior Accountant or Corporate Controller within the Corporate Accounting group. If either the Senior Accountant or the Director of Corporate Accounting are absent during this

procedures, either of them has the authority to review the other's set of invoices. Invoices are attached to these checks for support, which may be reviewed for proper approval and coding. A check listing is then sent electronically to the bank each week.

Business Managers in the field can review payments through JDE system.

Capital Projects

Each year budget development for individual projects is done by the Operations organization (reporting to the COO), but approved by executives and Board members who determine the total amount of capital expenditures to make each year (\$36 million in 2012) before individual projects are identified and approved. A Capital Projects Review Team (CPRT) is responsible for review of all projects > \$50,000, including projects associated with all operating companies as well as corporate projects. The JDE system is used for tracking and monitoring projects, with CPRT meetings for discussing projects, which is comprised of all five RDs (includes chair and co-chair positions), the Accounting & Finance Capital Projects Manager, a Regulatory Accounting Manager, a Regional Finance Manager, two Senior Regulatory Accountants (one from each team), two Project Managers, four Regional Managers, plus others, such as RVPs, the other Regional Finance Manager, the other Regulatory Accounting Manager, Executive Director Regulatory Accounting, and other Regional Managers when their projects are discussed. The CPRT meets every Friday at 2:00 p.m. through most of the year, although meetings are bi-weekly during the third quarter as the need to meet lessens after all projects in the current year's capital plan have been reviewed and acted on. The Capital Projects group also communicates regularly with operations management and staff through use of the capital budgeting report by region, with individual company information provided. The group then converts construction in progress to fixed assets, usually within 30 days of completion.

Although details of capital projects for development of a five-year capital plan each year are handled by Operations (COO and a Regional Finance Manager), the Finance Planning & Analysis Manager uses high-level information (by company by month) for forecasting purposes (through 2020). The first two years of the five-year capital plan are fairly detailed by project, with less detailed information in the last three years. See the *Budget Process Evaluation* section of this chapter for additional details.

Tax Reporting/Compliance

The Tax Reporting/Compliance group is responsible for federal and state income taxes and taxes other than income (TOTI) taxes, including property, gross receipts taxes, etc., but excluding payroll taxes, which are handled by the HR group.



Financial Systems

Financial Systems		
Typical Work Steps	Information Required	Key Indicators
Review current financial systems in place; evaluate for completeness and appropriateness.	System descriptions and demonstration	Documentation and training are sufficient to allow proper usage of systems.

Project Phoenix was the name of a prior UI initiative to evaluate the state of its processes and systems. The company had not made a significant investment in technology in quite some time. Antiquated systems, lack of integration, and the lack of standardization were beginning to have an adverse effect on the company and its customers. Accordingly, UI set out to improve its capabilities and processes in the accounting, customer service, customer billing, and financial and regulatory reporting areas.

Project Phoenix began in early 2006 with a series of internal and external evaluations, which culminated in a business case presentation by Deloitte to the company in September 2006. The business case identified: Drivers for Change, Current State Overview, Recommended Solutions, Future State, and Benefits to Stakeholders. The business case presentation confirmed UI's initial evaluations that fragmented and non-standardized processes were complex and inefficient, with an attendant risk of error and control breakdown, which indicated that the infrastructure unnecessarily placed stress on the company's human capital resources. The company's legacy accounting and customer care systems were either fully customized or unsupported, or both, which resulted in a risk of breakdown and impeded management's ability to obtain information to make decisions, and use of spreadsheets made ensuring accuracy and control difficult, resulting in the potential for errors in operation and regulatory reports. After the business case presentation and an evaluation of potential solutions, UI management selected JD Edwards Enterprise One (JDE) as the financial system, including asset management, and Oracle's Customer Care and Billing System (CC&B) as the customer information system. UI management believes that these systems are integrated in a manner that allows for the sharing of crucial information between the company's different operational organizations.

Existing major systems include:

- ◆ JDE, which was placed in service on December 3, 2007, is a web-based software system that allows access from multiple locations. The WSC organization is currently running Version 8.12. The system is composed of the Accounts Payable, Human Resources/Time Capture, Requisitioning, Capital Projects, Fixed Assets, Equipment Management, and General Ledger modules. According to company management, the system includes enhanced features, such as the following:
 - Tracking and integration components for improved recording and retrieving of data
 - Record keeping and retrieval functions for easier production of financial and regulatory reports

- Increased accuracy leading to improved management decision making processes so as to allow the company to more efficiently deliver reliable information to regulators
- Reduced manual effort and reliance on spreadsheets so as to improve the reliability of reports

The Capital Projects module allows employees to view and track projects in real-time, which company management states allows employees to manage projects and costs in a more effective manner, which benefits the company and its customers.

- ◆ CC&B, which was placed into service on June 2, 2008, is also a web-based software system. The WSC organization is currently running Version 2.1. The web-based feature allows for quicker return of information to the user and allows for “quicker fixes” should the system go down involuntarily, or need to go down for routine maintenance. The system is composed of the Customer Management and Service, Billing, Accounts Receivables & Collections, Device Management, and Meter Reading modules. According to company management, the system includes enhanced features, such as the following:
 - Customer and premise information were linked in one account. As residents moved, the service order history at the premise was purged and prior service activities eventually became unavailable for viewing. This resulted in the loss of valuable information. In addition, field personnel were sent daily service orders either through email or fax. They did not have access to the legacy billing system. Upon completion of the service orders, the information was emailed or faxed back to the billing office for closure of the orders. The process was manually intensive and led to untimely responses due to incomplete fax transmissions. Additionally, as residents moved from one premise to another within the Company, they were issued a new account number. There was no efficient means of tracking a customer and transferring payment information, service history and billed services (debt) from one account to another.
 - CC&B offers the ability to focus on either a customer or a premise. Field activity information at a premise is stored in the records indefinitely, allowing field personnel to retain prior history of past service issues at a residence. This allows them to act in a cost effective manner when considering repair or replacement of equipment or lines at a premise. In addition, CC&B automates field activities to the field. A background process makes key decisions about assignments and timing. CC&B automates field activity dispatching and allows for uploading and downloading to hand-held devices. The system allows the field operators to complete field activities in a live environment so that CSR’s (customer service representatives) have the information available to them as soon as the order is completed. In this regard, UI deployed “tough books” in each field vehicle.
 - CC&B is used on a daily basis to look up customer accounts to answer billing questions. Billing issues are identified and resolved immediately before the customer receives their bill. All corrections or adjustments to a customer’s account are entered into CC&B and, again, posted in real time.



- Customer Service personnel use CC&B to look up customer's accounts and review meter reads, payment history, consumption history and mailing addresses. All pertinent information is displayed on one screen, which helps Customer Service answer questions quickly. New customers are signed up through CC&B. Customers discontinuing their service are also taken care of through CC&B. Payments are posted in real time to a customer's account through CC&B.
- ◆ UI's Water Main SharePoint site, which has sites for WSC organizations to communicate with company employees, including examples such as human resources, regulatory (opening memos, talking points, orders, tariffs, etc.), etc.

Budget Process Evaluation

Budget Process Evaluation		
Typical Work Steps	Information Required	Key Indicators
Review organization(s) responsible for developing and monitoring the capital, operations and maintenance, and position (employee) budgets.	Organization charts of budget department and personnel responsible for developing and using or monitoring the capital, operations and maintenance, and position budgets.	Clearly defined and appropriately placed responsible budget personnel.
Review documentation and instructions concerning the capital, operations and maintenance, and position budgets.	Budget instructions and manuals related to development and use of the capital, operations and maintenance, and position budgets.	Complete, concise, and easily understood instructions and guides for developing and use or monitoring of the capital, operations and maintenance, and position budgets exist.
Review processes involved in developing and monitoring or using the capital, operations and maintenance, and position budgets. Also review, as appropriate, key assumptions, decision tools and techniques, approval levels, cost and revenue responsibility and accountability, and involvement of proper levels of management.	Description and/or flow chart of processes involved in developing and using or monitoring the capital, operations and maintenance, and position budgets. Copy of any communications with Twin Lakes management regarding most recent budgeting cycle	Appropriate processes are established, documented, and being followed in practice. The systems compare actual amounts to budgeted amounts and produce reports that are timely, accurate, and conducive to management by exception.
Determine whether actual performance is within budgeted amounts in the areas of operations, cash flow, capital expenditures, and capital structure. Evaluate the policies and procedures for management of actual expenditures against budgeted amounts. Evaluate the overall performance and practices in monitoring and controlling to budgets. Determine whether the budgeting function is integrated appropriately with other functions.	Monthly operating statements (past three years) Budget variance reports (past three years)	The planning, analysis, and reporting processes provide ample information and data for departmental managers to support their individual realms of operation.

When asked to provide the mission, goals, objectives, and functions of each Twin Lakes and Utilities, Inc. organization, the following UI mission statement, which is on its web page, was provided:

At Utilities, Inc., we are committed to providing safe, reliable and cost effective service to our customers, a safe, challenging and enjoyable work environment for our employees, and a fair return for our shareholders; all with the underlying commitment to act with integrity, protect the environment and enhance the communities we serve.

Individual goals, objectives, or functions by UI or Twin Lakes department were not provided, as discussed in the *Human Resources & Payroll* section of *Chapter III – Customer Services & Key Support Units*, the company has recently developed Tier II KPIs for department heads.

In July 2011, UI kicked off an 18-month forecast process (profit and loss, balance sheet, and cash flows) to cover the last six months of 2011 and the entire 2012 year. It is slightly different from what was done in the past. The company management anticipated that it would save a lot of time later in the year when the numbers for the 2012 budget were refreshed. The timeline for this forecasting process, which included development of the 2012 budget, for the first round of reviews is shown in *Exhibit IV-4*.



**Exhibit IV-4
2011 Timeline
First Round Reviews**

Date	Description
26-Jul-11	Salary and fuel templates
27-Jul-11	Master forecast files, corporate cost centers, and purchased water and sewer
28-Jul-11	Bad debt, regulatory commission expense discussions
29-Jul-11	North RVP review (~3 hours per region)
1-Aug-11	South RVP review (~3 hours per region)
2-Aug-11	First review of TOTI, other income, AFUDC, interest expense, A&D, cash CIAC, deferred charges, revenue
3-Aug-11	First round of corporate cost center reviews
15-Aug-11	Second review of TOTI, RC expense, other income, A&D, interest expense, AFUDC, CIAC, deferred charges
16-Aug-11	Second round of corporate cost center reviews
17-Aug-11	Second North RVP review (~3 hours per region)
18-Aug-11	Second South RVP review (~3 hours per region)
19-Aug-11	First review with E-Team and responses to the regions
26-Aug-11	First model load
30-Aug-11	Third North RVP review (~2 hours per region)
31-Aug-11	Third South RVP review (~2 hours per region)
1-Sep-11	Finalize all non O&M P&L items
2-Sep-11	Second review with E-Team
14-Sep-11	Finalize O&M from regions
16-Sep-11	Balance sheet and SOCF forecast, second model load
20-Sep-11	Final E-Team presentation
23-Sep-11	Presentation package ready for Highstar

Source: Information Response 15

A&D=amortization and depreciation

AFUDC=allowance for funds used during construction

CIAC=contributions in aid of construction

SOCF=statement of cash flow

TOTI=taxes other than income

The timeline for this process for the second round of reviews is shown in *Exhibit IV-5*.

Exhibit IV-5
2011 Timeline
Second Round Reviews

Date	Description
23-Aug-11	RVP regional reviews (~90 minutes per region)
24-Aug-11	RVP regional reviews (~90 minutes per region)
26-Aug-11	First review with E-Team and responses to the regions
30-Aug-11	Second review of TOTI, RC expense, other income, A&D, interest expense, AFUDC, CIAC, deferred charges
31-Aug-11	First model load
1-Sep-11	Second round of corporate cost center reviews
5-Sep-11	RVP regional reviews (~60 minutes per region)
6-Sep-11	RVP regional reviews (~60 minutes per region)
8-Sep-11	Finalize all non O&M P&L items
13-Sep-11	Second review with E-Team
15-Sep-11	Finalize O&M from regions
21-Sep-11	Balance sheet and SOCF forecast, second model load
27-Sep-11	Final E-Team presentation
30-Sep-11	Presentation package ready for Highstar

Source: Information Response 15 Attachment 5



Exhibit IV-6 illustrates the 2010, 2011, and 2012 Twin Lakes expense budget, actual, and variance figures.

Exhibit IV-6
Operating Expenses
2010 to 2012
as of March 31, 2012

Account Name	2010			2011			2012		
	Budget Total	Actuals Total	Variance Total	Budget Total	Actuals Total	Variance Total	Budget Total	Actuals Total	Variance Total
PURCHASED WATER EXPENSE	-	-	-	-	-	-	-	-	-
PURCHASED SEWER TREATMENT	-	-	-	-	-	-	-	-	-
ELEC PWR - WATER SYSTEM	115,199	73,737	41,462	72,000	79,830	(7,830)	80,050	19,733	60,317
ELEC PWR - SWR SYSTEM	84,276	154,460	(70,184)	138,000	170,515	(32,515)	154,025	39,228	114,797
ELEC PWR - OTHER	-	-	-	-	-	-	-	-	-
CHEMICALS	42,000	46,800	(4,800)	68,760	51,498	17,262	66,300	7,086	59,214
METER READING	16,200	5,171	11,029	-	2,817	(2,817)	12,000	1,744	10,256
BAD DEBT EXPENSE	21,334	15,140	6,194	26,409	8,363	18,046	9,762	1,075	8,687
BILLING & CUSTOMER SERVICE EXPENSE	840	223	617	500	517	(17)	-	377	(377)
EMPLOYEE BENEFITS	-	-	-	-	-	-	-	-	-
INSURANCE EXPENSE	-	-	-	-	511	(511)	-	-	-
IT DEPARTMENT	-	1,099	(1,099)	-	-	-	-	-	-
MISCELLANEOUS EXPENSE	15,000	2,600	12,400	4,060	3,658	402	2,560	-	2,560
OFFICE EXPENSE	2,400	2,441	(41)	2,280	3,100	(820)	5,130	910	4,220
OFFICE UTILITIES/MAINTENANCE	18,804	18,046	758	17,000	14,551	2,449	20,390	5,774	14,616
OUTSIDE SERVICE EXPENSE	4,164	131,165	(127,001)	4,000	15,134	(11,134)	4,000	366	3,634
REGULATORY COMMISSION EX	94,584	63,100	31,484	45,935	28,320	17,615	63,045	97,161	(34,117)
RENT EXPENSE	-	-	-	-	-	-	-	-	-
SALARIES & WAGES	279,570	127,644	151,926	139,561	43,377	96,184	68,543	32,754	35,789
TRAVEL EXPENSE	4,596	1,480	3,116	4,200	2,996	1,204	3,960	-	3,960
FLEET TRANSPORTATION EXP	1,200	8,713	(7,513)	-	-	-	-	16	(16)
MAINTENANCE TESTING	22,404	43,444	(21,040)	54,600	41,887	12,713	45,000	9,749	35,251
MAINTENANCE-WATER PLANT	38,004	19,783	18,221	37,800	23,347	14,453	7,800	4,020	3,780
MAINTENANCE-SEWER PLANT	56,640	24,467	32,173	40,250	56,045	(15,795)	46,850	9,469	37,381
MAINTENANCE-WTR&SWR PLAN	50,952	36,238	14,714	12,710	22,343	(9,633)	5,033	354	4,679
SEWER RODDING	14,401	42,379	(27,978)	59,200	39,575	19,625	59,200	-	59,200
SLUDGE HAULING	31,548	13,990	17,558	18,000	21,157	(3,157)	10,000	-	10,000
TOTAL EXPENSES	914,116	832,120	81,996	745,265	629,540	115,725	663,647	229,817	433,831

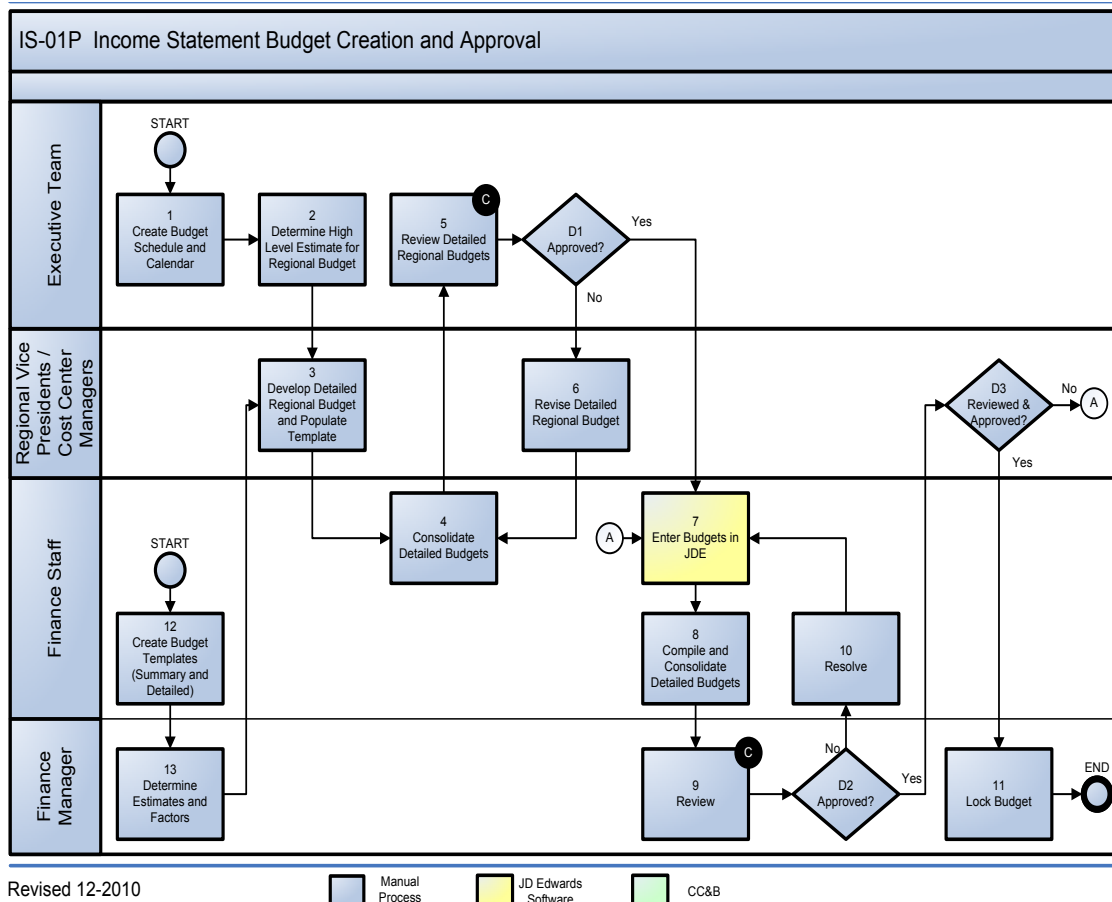
Source: Information Response 18

Budgeting

One of the key areas budgeted is profit/loss (P/L), including revenues, operations and maintenance (O&M) expenses, taxes, and depreciation/amortization (D/A), by line item. There's been a evolution over the last 2 ½ years, in which WSC management provides a top-down % and company-wide assumptions, but has wanted to improve accountability of management, so the process is now more bottoms up. Also budgeted is headcount and overtime, which is done by region. When UI primarily used a tops-down approach, approximately 30 line items were budgeted; now approximately 550 are.

A typical budget process follows the diagram shown in *Exhibit IV-7*.

**Exhibit IV-7
Budgeting Process
as of April 30, 2012**



Source: Information Response 24

During the JUL-NOV time period, a one-year budget for the upcoming year is developed; then every six months, an 18-month forecast through 2013 is done. The original budget plus forecasts are loaded into the JDE system and included on reports. In developing the budget, typically three rounds of reviews during the budgeting process are done.

Regarding O&M expenses, the Midwest Region, including Twin Lakes, in the middle of 2012 is reforecasting 2012 and forecasting 2013 prior to developing 2013's budget. By late 2012 or early 2013 the O&M budget will be finalized. The budget is based on historical data and analyses performed by the Regional Finance Manager on behalf of Regional Managers, RDs, and RVPs. As part of the budget, salaries and wages represent only those individuals in the region and state, not others supporting the region, who are allocated between the regions and states at the regional VP level based on equivalent residential connections (ERCs), as discussed later in this chapter. Fleet fuel and maintenance is identified at the state level and allocated by number of ERCs in each utility, as all Indiana employees are

located at Twin Lakes, but serve all three Indiana utility organizations. Once the budget has been developed at the regional level, it is sent to the WSC Finance Planning & Analysis for consolidation. This employee is also involved in providing the budget schedule and assumptions to the regions and coordination of selected other budget items like revenues, purchased water and sewerage, bad debt, etc. Allocations from corporate are not included in individual regional variance reports, as they are for regulatory purposes only.

Forecasting

Originally UI's forecasting model (Excel spreadsheet) was at a very high level and was not robust, then over the years it has been made much more detailed.

Today, there's a consolidated organization tab plus individual tabs for each UI company, resulting in approximately 110-115 tabs. It is manually updated by the Finance Planning & Analysis Manager monthly by the fifteenth business day for actual results; usually takes three to four hours to populate spreadsheet using macros. Each tab shows historical and forecasted data by month until 2020, with the following three statement information provided:

- ◆ Balance sheet
- ◆ Income statement
- ◆ Cash flow

It also helps determine if a company should or should not be filing a rate case in the next 12 to 18 months or beyond.

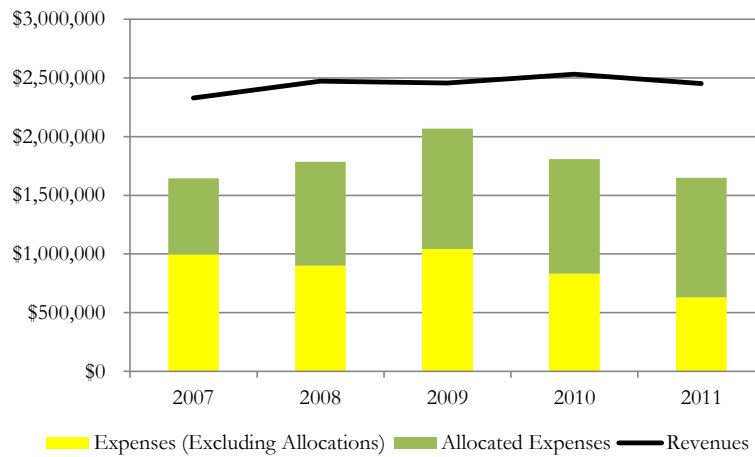
Various entities, such as Finance & Accounting, Regulatory Accounting, and Capital Projects, feed the forecasting model. The capital plan, which Operations supports, is detailed by project by quarter (not monthly) and is a five-year plan; therefore, when the Finance Planning & Analysis Manager receives this information, he only uses summary information and straight lines quarterly data equally among the three months of a quarter. Occasionally, if needed, he must also make adjustments so some items going forward in the spreadsheet tabs.

Cost Trends Analyses

Cost Trends Analyses		
Typical Work Steps	Information Required	Key Indicators
Review and analyze capital expenditures, operations and maintenance (O&M) costs, and activity costs for past three years, plus any upcoming forecasts.	Capital expenditures, operations and maintenance (O&M) costs, and activity costs for past three years	Cost trends are favorable and reasonable given Twin Lakes operating environment.

Exhibit IV-8 illustrates Twin Lakes revenues, which have been fairly constant in recent years (although slightly higher than in 2006 and 2007), versus expenses, which have been decreasing since 2009.

Exhibit IV-8
Revenues versus Expenses
2006 to 2011



Source: Information Response 19 and 59

Exhibit IV-9 illustrates Twin Lakes O&M expenses (excluding allocations) by year from 2007 through March 31, 2012.

Exhibit IV-9
O&M Expenses (Excluding Allocations)
2007 to 2012
as of March 31, 2012

EXPENSE CATEGORY	2007	2008	2009	2010	2011	2012 Q1
PURCHASED WATER EXPENSE	-	-	-	-	-	-
PURCHASED SEWER TREATMENT	-	-	-	-	-	-
ELEC PWR - WATER SYSTEM	116,025	118,466	130,478	73,737	79,830	19,733
ELEC PWR - SWR SYSTEM	68,260	74,278	91,856	154,460	170,515	39,228
ELEC PWR - OTHER	-	-	-	-	-	-
CHEMICALS	34,326	51,011	44,196	46,800	51,498	7,086
METER READING	15,160	14,159	15,029	5,171	2,817	1,744
BAD DEBT EXPENSE	11,344	15,485	45,298	15,140	8,363	1,075
BILLING & CUSTOMER SERVICE EXPENSE	8,921	440	527	223	517	377
EMPLOYEE BENEFITS	-	-	-	-	-	-
INSURANCE EXPENSE	3,683	-	-	-	511	-
IT DEPARTMENT	956	1,618	136	1,099	-	-
MISCELLANEOUS EXPENSE	17,416	18,623	11,099	2,600	3,658	-
OFFICE EXPENSE	17,123	18,124	804	2,441	3,100	910
OFFICE UTILITIES/MAINTENANCE	20,781	24,313	20,142	18,046	14,551	5,774
OUTSIDE SERVICE EXPENSE	4,696	39,997	26,991	131,165	15,134	366
REGULATORY COMMISSION EX	22,641	(94,288)	196,981	63,100	28,320	97,161
RENT EXPENSE	10,300	19,800	-	-	-	-
SALARIES & WAGES (GROSS)	321,856	410,032	452,179	295,128	268,195	67,031
CAP TIME ADJUSTMENT	(2,488)	(125,212)	(158,981)	(167,484)	(224,819)	(34,277)
TRAVEL EXPENSE	22,755	25,826	5,748	1,480	2,996	-
FLEET TRANSPORTATION EXP	45,434	8,483	3,498	8,713	-	16
MAINTENANCE TESTING	43,625	49,727	51,475	43,444	41,887	9,749
MAINTENANCE-WATER PLANT	54,306	49,706	38,737	19,783	23,347	4,020
MAINTENANCE-SEWER PLANT	67,180	42,090	54,914	24,467	56,045	9,469
MAINTENANCE-WTR&SWR PLAN	52,761	109,649	(14,418)	36,238	22,343	354
SEWER RODDING	35,968	26,926	13,497	42,379	39,575	-
SLUDGE HAULING	4,004	2,200	10,802	13,990	21,157	-
Total	997,031	901,454	1,040,988	832,120	629,540	229,817

Source: Information Response 19 Attachment 1

Some components of O&M expenses have declined, some have increased, and some have fluctuated over the past six years (2007 to March 31, 2012). According to UI management, in recent years there has been a greater emphasis placed on fiscal responsibility, cost controls, and better defined coding protocols. As such, expense categories may have been reapportioned over this time period. Among the changes reflected above in *Exhibit IV-9* are the following:

- ◆ *Electric Power – Water* declined in 2010 compared to prior years, while at the same time *Electric Power – Sewer* has increased. Late in 2010 the company identified some electric power accounts that were being coded to sewer instead of water. At that time, we reviewed all of the electric power accounts for Twin Lakes to ensure that they were being coded to the correct line item. There was a reclassification posted for year-to-date for 2010 and going forward, according to

UI management, the accounts have been posted correctly. Looking at the two line items together there has actually been an increase over the years being reviewed.

- ◆ *Meter Reading* includes expenditures on contract meter readers only. In recent years the majority of the meter reading at Twin Lakes has been performed in-house by its team members.
- ◆ *IT Department* would typically only include in Twin Lakes expenses any miscellaneous computer supplies that are purchased by team members at the local facility. The majority of IT expenses are managed by corporate and are separately budgeted and controlled by them; therefore, they are included in allocations not shown above in *Exhibit IV-9*.
- ◆ *Miscellaneous Expense* included approximately \$4,000 in 2007 in penalties/fines; significant expenditures on training in 2008, and \$7,300 in licenses paid to IDEM in 2009, in which the latter should have been in the permits line item under maintenance.
- ◆ *Office Expense* in 2007 and 2008 were particularly high throughout the years in *Office Supply Stores* and *Other Office Expense*. After that time, as discussed previously, UI management indicates that there was a greater emphasis being placed on fiscal responsibility, cost controls, and better defined coding protocols.
- ◆ *Salaries and Wages* in 2008 and 2009 included approximately \$43,000 and \$53,000, respectively, for customer service salaries, which have been captured in a separate cost center from 2010 onwards. In addition, there was a decrease in the Operations salaries in 2010 compared to prior years.
- ◆ *Fleet Transportation Expense* is captured at a State Cost Center level and is allocated to individual systems. This category is largely comprised of charges from Donlen, which is UI's fleet management vendor.
- ◆ *Maintenance – Water & Sewer* includes deferred maintenance amortization, which includes the amortization of multi-year testing (usually over three years) and amortization of capital projects such as tank painting (usually over five years). This amortization decreased in 2009 from an average of about \$3,600 per month to about \$1,600 per month. In addition, in September 2009, there was a (roughly \$59,000) credit to deferred maintenance amortization to clean up prior period amortization.



Exhibit IV-10 illustrates Twin Lakes' capital expenditures (excluding allocations) by year from 2007 through 2011.

Exhibit IV-10
Capital Expenditures
2007 to 2011
as of March 31, 2012

Category/Project	2007	2008	2009	2010	2011
Plant Spending		339,383	634,662	513,484	379,311
Plant Cap Time		109,751	163,561	131,875	120,781
Transportation		12,425	7,699	(2,245)	44,071
PROJECTS:					
Master Plan for Water & Sewer	135,849	109,093	(70,000)		
Engineering Based on Master Plan		516	(516)		
I & I Repairs		1,204	9,693		
Engineer Manhole 307 Relief Project		151,386	26,006		
Lift Station E Replace, Wet Well and Controls			997		
Rod and Video		14,807			
Lift Station E Rehabilitation					160,223
Manhole Inspections And Repairs					76,001
Smoke Testing					18,484
Televising & Jetting Swr Mains					95,841
Total	135,849	738,565	772,102	643,114	894,710

Source: Information Responses 19 Attachment 2 and 87
Negative figures above reflect clean-up entries.

In addition to the above capital charges in the 6/30/10 Test Year, approximately \$42,000 of Net Plant in service was being allocated to Twin Lakes from WSC.

As discussed above, Water Service Corporation is UI's service company. An affiliate agreement dated September 24, 2010 was filed with the Indiana Utility Regulatory Commission (IURC). This agreement was between Water Service Corporation and UI's three Indiana utilities, Twin Lakes Utilities, Inc., Water Service Company of Indiana, Inc., and Indiana Water Service, Inc. (referred to as operating company). WSC provides the following services to Twin Lakes:

- ◆ *Executive:* The principal executive officers of Water Service Corporation, such as the Chairman of the Board, President and Vice Presidents, and Treasurer will assist and advise the operating company in respect to corporate, financial, operating, engineering, organization, regulatory, and other problems by:
 - Keeping themselves informed in regard to the operation, maintenance and financial condition of, and other matters relating to, the operating company through contacts with the officers, directors, and other representatives of the operating company
 - Visiting the property of the operating company when necessary to the proper furnishing of services

- Supervising personnel of the service company to the end that services shall be performed efficiently, economically, and satisfactorily to the operating company
- ◆ *Engineering:* Supply engineering services as required in all areas of design, construction, operation, and management of the operating company.
- ◆ *Operating:* Perform and/or control all normal operating functions, including pumping, treatment, and distribution as well as maintenance of all equipment and facilities, in which these responsibilities include testing and record keeping to insure compliance with all state and local regulatory agency requirements.
- ◆ *Accounting:* Total accounting service, including bookkeeping, payroll, tax determination, financial statement preparation, budgets, credit. P.S.C. annual reports, etc.; periodic analyses to be made for purposes of planning and measurement of efficiency.
- ◆ *Legal:* Employ general counsel as necessary to advise and assist it in the performance of the services herein provided for and to aid the operating company in all matters where such assistance may be desired.
- ◆ *Billing and Customer Relations:* Handle all billing and collections and serve as the link between the customer and the operating company in all areas such as new accounts, deposits, meter reading inquiries, and complaints.
- ◆ *Construction:* Perform directly or supervise all construction, including customer connections, meter installations, main extensions, plant expansions, or capital additions of any nature as required by the operating company.
- ◆ *All Other Services as Provided for in Appendix A:* In addition to items above, employ or provide personnel to perform the attached services, or in the instance of assets, liabilities, and associated non-cash items, has incurred costs associated with providing service to the corporate headquarters, regional areas, or to all operating companies as a whole.

The allocated costs from these services will be “at cost” for costs attributable to all operating companies, costs attributable to the Service Company, or for costs that cannot, without excessive effort and expense, be directly identified and related to services rendered to a particular operating company. If appropriate, costs that may be identified and related to services rendered to a particular group of operating companies are to be charged directly to such group. Any remaining costs are to be prorated on the basis of the proportion of active equivalent residential customers (ERCs) served by the operating company to the total number of active ERCs served by the parent and its affiliates, as determined at the end of each month.

In support Twin Lakes direct and indirect costs, Schumaker & Company asked the company to provide a copy of daily accounting standards and recordkeeping methods and procedures that support the daily operations among Twin Lakes and its affiliated entities. In response, we were provided a 2011 (revised April 11, 2011) *Business Rules and Processes* document and a 2011 *Record Retention Policy & Guide* document.



B. Findings & Conclusions

Finding IV-1 **Cost allocations rely on equivalent residential connections to charge UI subsidiaries, such as Twin Lakes, with direct charging of employee time not used to the extent possible.**

Best practices with regard to assigning costs to UI subsidiaries would be to have costs/revenues directly charged whenever possible. The preferred hierarchy is:

1. Direct charging whenever possible
2. If not possible, then direct allocation should be used
3. Only in rare cases should indirect allocation, such as a general allocator, be used

However, direct charges are used on a limited basis within the UI organization. Employee time is directly charged using the JDE system for situations such as capital projects, rate cases, etc. Also, accounts payable invoices are directly charged where the Twin Lakes utility can be identified. Otherwise allocations using ERCs is subsequently done. Within the UI organization, it is essentially used as a general allocator; therefore, extensive use of ERCs may not be the best allocation factor for many WSC functions, as there is not a cost causation link with many of these functions.

Finding IV-2 **No internal or external audits are regularly performed of UI's affiliate relationships and associated transactions.**

In response to our request for a description and copies of internal or external audit programs pertaining to water operations, and copies of all such audits performed during the last three years, company management provided UI and subsidiary company consolidated financial statements for 2008, 2009, 2010, and 2011 periods. Then in response to our request for copies of internal or external audit programs and reports pertaining to affiliated relationships or transactions performed during last three years, UI management provided 2009 direct testimony of Patrick L. Baryenbruch, who performed a market cost comparison of 2008 affiliate company charges to Massanutten Public Service Corporation in Virginia. This is old and does not apply specifically to Indiana.

Furthermore, as Utilities, Inc. has no Internal Audit department, no internal audits have been conducted pertaining to affiliated relationships or transactions.

C. Recommendations

Recommendation IV-1 **Perform a detailed analysis to verify that the use of the number of equivalent residential connections for allocating costs among regulated utilities reasonably approximates the use of cost-causative factors; subsequently make modifications, as appropriate, if significant variances are noted and a change in procedures can be economically justified. (Refer to Finding IV-1)**

Schumaker & Company understands that number of equivalent residential connections is a straightforward, easily understood, and relatively inexpensive cost allocation factor to implement. Although it may be a simpler mechanism than cost-causative factors to implement, many utilities have found that use of cost allocation modules as part of technology systems negates the work of implementing use of cost-causative factors. Twin Lakes, as a regulated utility, should be able to provide evidence to the IURC and Twin Lakes' ratepayers that number of equivalent residential connections is a close approximation to the use of cost-causative factors (not just number of customers as previously used by UI but a comprehensive list of cost-causative factors that many utility organizations typically use) – and that one state's customers are not advantaged or disadvantaged by its cost allocation methodology in use. Just because UI management “believes” that use of number of ERCs is reasonable does not make it so. Therefore, initially WSC should perform a detailed analysis, perhaps on a test-year basis, to determine whether number of ERCs for allocating costs among regulated utilities is reasonable, and the results should be provided to IURC as a follow-up to this audit. If the outcome of this analysis indicates that number of ERCs does not approximate cost-causative factors, then UI should make modifications, as appropriate, if significant variances are noted and a change in factors can be economically justified. Subsequently, every three to five years (or more often if major changes to UI's organization occur), it should revisit whether its methodology and associated factor(s) are appropriate.

Recommendation IV-2 **Emphasize increased use of time reporting for direct charging of time and associated costs. (Refer to Finding IV-1)**

As shown previously in *Exhibit IV-8*, allocated expenses have comprised between 40% and 60% of Twin Lakes' total expenses. Because of UI's reliance on ERCs for allocating costs, in few situations are WSC employees likely to directly charge their costs. The company should develop a program to encourage WSC employees to increase direct charging of time.

Recommendation IV-3 **Regularly perform audits of affiliate relationships and transactions. (Refer to Finding IV-2)**

The UI organization should have its auditors periodically perform audits of affiliate relationships and transactions to ensure that practices are actually following policies and procedures. Audits should occur at least every three years after completion of the first audit.

