

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN ADJUSTMENT OF RATES OF THE) CASE NO.
SOUTH SHORE WATER WORKS CO.) 2002-00108

O R D E R

On March 29, 2002, South Shore Water Works Co. (South Shore) filed its application for Commission approval of proposed water rates. Commission Staff, having performed a limited financial review of South Shore s operations, has prepared the attached Staff Report containing Staff s findings and recommendations regarding the proposed rates. All parties should review the report carefully and provide any written comments or requests for a hearing or informal conference no later than 10 days from the date of this Order.

IT IS THEREFORE ORDERED that all parties shall have no more than 10 days from the date of this Order to provide written comments regarding the attached Staff Report or requests for a hearing or informal conference. If no request for a hearing or informal conference is received, this case will be submitted to the Commission for a decision.

Done at Frankfort, Kentucky, this 2nd day of August, 2002.

By the Commission

ATTEST:

W. H. Fowler
Deputy Executive Director

COMMONWEALTH OF KENTUCKY
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AN ADJUSTMENT OF RATES OF THE)	CASE NO.
SOUTH SHORE WATER WORKS CO.)	2002-108

STAFF REPORT

Prepared by: Scott Lawless
Public Utility Financial Analyst
Water & Sewer Revenue
Requirements Branch
Division of Financial Analysis

Prepared by: Eddie Beavers
Public Utility Rate Analyst
Communications, Water, and
Sewer Rate Design Branch
Division of Financial Analysis

STAFF REPORT
ON
SOUTH SHORE WATER WORKS CO.
CASE NO. 2002-108

On March 29, 2002, South Shore Water Works Co. (South Shore) filed its application seeking to increase its rates pursuant to 807 KAR 5:001, Section 10. The proposed rates would generate approximately \$121,631 annually in additional revenues, an increase of 25.62 percent over normalized test year revenues from water sales as calculated by South Shore of \$474,679.

The scope of Staff s review was limited to obtaining information as to whether the test period operating revenues and expenses were representative of normal operations. Insignificant or immaterial discrepancies were not pursued and are not addressed herein.

Scott Lawless of the Commission s Water and Sewer Revenue Requirements Branch, began the limited review on May 14, 2002. This report summarizes Staff s review and recommendations. Mr. Lawless is responsible for the revenue requirement determination and Eddie Beavers is responsible for the determination of pro forma revenues and rate design.

South Shore s requested operating statement is detailed in Attachment A. Staff s recommended operating statement and explanation of adjustments are shown in Attachment B. Staff s revenue requirement calculation is summarized in Attachment C. As shown in Attachment C Staff recommends that South Shore be allowed to adjust rates in order to raise an additional \$30,996 in annual operating revenue. This

represents a 6.53 percent increase over test year revenues. Staff's proposed rates are determined in the Cost of Service Study as included herein as Attachment D. Sheet 7 of Attachment D includes the recommended rates while Sheet 8 includes a comparison of Staff's recommended rates and South Shore's current rates.

Signatures

Prepared by: Jack Scott Lawless, CPA
Public Utility Financial Analyst
Water & Sewer Revenue
Requirements Branch
Division of Financial Analysis

Prepared by: Eddie Beavers
Public Utility Rate Analyst
Communications, Water, and
Sewer Rate Design Branch
Division of Financial Analysis

ATTACHMENT A
STAFF REPORT CASE NO. 2002-108
SOUTH SHORE S REQUESTED OPERATIONS

	Test Year	Adjustment	Pro Forma
Operating Revenue			
Water Sales	471,724	2,955	474,679
Other Operating Revenue	15,475		15,475
Total Operating Revenue	<u>487,199</u>	<u>2,955</u>	<u>490,154</u>
Operating Expenses			
Operation and Maintenance			
Wages	121,366	7,570	128,936
Salary	90,000	(10,500)	79,500
Employee Insurance	32,141	16,240	48,381
Pensions	3,772	(430)	3,342
Power Plant	34,235		34,235
Chemicals	9,599		9,599
Materials and Supplies Office	17,112	401	17,513
Materials and Supplies Plant	15,756	68	15,824
Well Amortization Expense	2,528	1,807	4,335
Materials and Supplies Distribution	7,719	(249)	7,470
Hydrant Amortization		575	575
Reservoir Amortization		16,630	16,630
Engineering	2,437	(387)	2,050
Accounting	2,400	200	2,600
Legal	7,089	(4,662)	2,427
Property Rentals Building	9,375	525	9,900
Property Leases Tanks	850		850
Property Rentals Easements	300		300
Equipment Rentals	15,997	(4,155)	11,842
Transportation Expense	6,030		6,030
Insurance Vehicles	3,896	(874)	3,022
Insurance Property and Liability	5,803		5,803
Workers Compensation	4,739	(104)	4,635
Insurance Other	2,898		2,898
Total Operation and Maintenance Expenses	<u>396,042</u>	<u>22,655</u>	<u>418,697</u>
PSC Assessment	1,083		1,083
Property Taxes	10,052	828	10,880
Payroll Taxes	16,651	119	16,770
Depreciation	40,463	321	40,784
Total Operating Expenses	<u>464,291</u>	<u>23,923</u>	<u>488,214</u>
Net Operating Income	<u>22,908</u>	<u>(20,968)</u>	<u>1,940</u>

ATTACHMENT A
STAFF REPORT CASE NO. 2002-108
SOUTH SHORE S REQUESTED OPERATIONS

Non-Operating Income/(Expense)			
Jobbing Revenue	10,264	(5,132)	5,132
Collections from P&M Sanitation	845	(422)	423
Payments to P&M Sanitation	(829)	415	(414)
Interest Income	1,161	(280)	881
Investment Interest Income	3,396	(2,708)	688
Other Revenue	3,560	(1,398)	2,162
Interest Expense	(13,539)	583	(12,956)
Extraordinary Income	12,500	(12,500)	-
Total Non-Operating Income/(Expense)	<u>17,358</u>	<u>(21,442)</u>	<u>(4,084)</u>
Net Income Before Income Taxes	<u>40,266</u>	<u>(42,410)</u>	<u>(2,144)</u>

ATTACHMENT B
STAFF REPORT CASE NO. 2002-108
STAFF S RECOMMENDED OPERATIONS

	Test Year	Adjustment		Pro Forma
Operating Revenue				
Water Sales	471,724	2,955	A	474,679
Other Operating Revenue	15,475			15,475
Total Operating Revenue	487,199	2,955		490,154
Operating Expenses				
Operation and Maintenance				
Wages	121,366	7,570	A	128,936
Salary	90,000	(40,972)	B	49,028
Employee Insurance	32,141	16,240	A	48,381
Pensions	3,772	(962)	C	2,810
Power Plant	34,235			34,235
Chemicals	9,599			9,599
Materials and Supplies Office	17,112	401	A	17,513
Materials and Supplies Plant	15,756	68	A	15,824
Well Amortization Expense	2,528	1,362	D	3,890
Materials and Supplies Distribution	7,719	(249)	A	7,470
Hydrant Amortization			E	-
Reservoir Amortization		1,880	F	1,880
Engineering	2,437	(1,821)	G	616
Accounting	2,400	200	A	2,600
Legal	7,089	(1,414)	H	5,675
Property Rentals Building	9,375	525	A	9,900
Property Leases Tanks	850			850
Property Rentals Easements	300			300
Equipment Rentals	15,997	(4,155)	A	11,842
Transportation Expense	6,030			6,030
Insurance Vehicles	3,896	(874)	A	3,022
Insurance Property and Liability	5,803			5,803
Workers Compensation	4,739	(104)	A	4,635
Insurance Other	2,898		I	2,898
Total Operation and Maintenance Expenses	396,042	(22,305)		373,737
PSC Assessment	1,083			1,083
Property Taxes	10,052	828	A	10,880
Payroll Taxes	16,651	(2,212)	J	14,439
Depreciation	40,463	321	A	
		289	F	
		93	G	41,166
Total Operating Expenses	464,291	(22,985)		441,306
Net Operating Income	22,908	25,940		48,848

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Non-Operating Income/(Expense)			
Jobbing Revenue	10,264	(5,132) A	5,132
Collections from P&M Sanitation	845	(422) A	423
Payments to P&M Sanitation	(829)	415 A	(414)
Interest Income	1,161	(280) A	881
Investment Interest Income	3,396	(2,708) A	688
Other Revenue	3,560	(1,398) A	2,162
Interest Expense	(13,539)	583 A	(12,956)
Extraordinary Income	12,500	(12,500) A	-
<hr/>			
Total Non-Operating Income/(Expense)	17,358	(21,442)	(4,084)
<hr/>			
Net Income Before Income Taxes	40,266	4,498	44,764
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(A) Accepted Adjustments. South Shore proposed the following adjustments. A detailed explanation of each adjustment appears in Appendix 5 of the Application. Staff has reviewed these adjustments and recommends that they be accepted.

Water Sales	2,955
Wages	7,570
Employee Insurance	16,240
Materials and Supplies Office	401
Materials and Supplies Plant	68
Materials and Supplies Distribution	(249)
Accounting	200
Property Rentals Building	525
Equipment Rentals	(4,155)
Insurance Vehicles	(874)
Workers Compensation	(104)
Property Taxes	828
Depreciation	321
Jobbing Revenue	(5,132)
Collections for P & M Sanitation	(422)
Payments to P& M Sanitation	415
Interest Income	(280)
Investment Interest Income	(2,708)
Other Revenue	(1,398)
Interest Expense	583
Extraordinary Income	(12,500)

(B) Salary. As president and majority stockholder of South Shore, George J. Hannah oversees its daily operations. A complete description of Mr. Hannah's duties

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STAFF S RECOMMENDED OPERATIONS

and responsibilities are outlined in the Application at Appendix 7. During the test year Mr. Hannah received a salary in the amount of \$90,000. South Shore identified \$10,500 of that amount as non-recurring and eliminated it to determine pro forma expenses.

In South Shore's two previous cases, 94-188 and 97-321, the Commission limited Mr. Hannah's salary to \$38,703 and \$42,292, respectively. The amount allowed in case 94-188 was a part of the settlement agreement between South Shore and Commission Staff.

In case 97-321 South Shore requested that Mr. Hannah's salary be set at \$49,386. Staff issued a report recommending that Mr. Hannah's salary be limited to \$42,292 based upon the amount included in the settlement agreement of case 94-188 as adjusted for the same annual three percent cost of living allowances afforded all other South Shore employees over the same time period. Staff argued that this calculation was appropriate since Mr. Hannah's duties and responsibilities had not significantly changed since 94-188.

In case 97-321 South Shore accepted the recommendations and findings contained in the Staff Report for the purpose of expeditiously resolving the case but it asked to reserve the right to object to Staff's findings in future proceedings. In Appendix 7 of the current Application South Shore objects to Staff's limitation and further argues that such limitation in this case would be inappropriate.

Through discussions with Mr. Hannah and reading Appendix 7, Staff understands that Mr. Hannah dedicates an extraordinary amount of time owning and operating South Shore. However, it has not been demonstrated how Mr. Hannah's duties and

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responsibilities have substantially changed since cases 94-188 and 97-321 or that \$79,500 is reasonable compensation for the work performed. Therefore, Staff recommends that Mr. Hannah's salary be set in this case using the base salaries established in those cases as adjusted for the same three percent cost of living allowances given to all other South Shore employees since 1997. Staff's adjustment is calculated as follows:

Pro forma in case 97-321 (Wage for 1997)	\$42,292
Times: 1.03 Wage for 1998	43,561
1.03 Wage for 1999	44,868
1.03 Wage for 2000	46,214
1.03 Wage for 2001	<u>47,600</u>
1.03 Pro forma case 2002-108	49,028
Less: Test year	<u>(90,000)</u>
Adjustment	<u>\$(40,972)</u>

Staff recognizes that time required of Mr. Hannah will fluctuate as employee levels of South Shore change. Staff urges South Shore to maintain adequate Staff levels to ensure that customer service is not impaired.

(C) Pensions. South Shore contributes 1.75 percent of each fulltime employee's gross pay to a retirement fund. Staff has adjusted the test year contribution to reflect pro forma salaries and wages of fulltime employees.

Pro forma full-time wages	\$111,532
Pro forma salary	<u>49,028</u>
Total	160,560
Times: Contribution rate	<u>1.75%</u>
Pro forma	2,810
Less: Test year	<u>(3,772)</u>
Adjustment	<u>\$(962)</u>

(D) Well Amortization Expense. South Shore's primary source of supply is wells. The Commission has historically allowed South Shore to amortize well cleaning

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expenses. South Shore requested an annual amortization expense of \$4,335. The amount was determined by multiplying 11 total wells times the average cost of wells cleaned during the years 2000 and 2001 of \$1,970 and then dividing the result over a five- year amortization period. This approach does not meet the known and measurable requirement for adjusting test year expenses as established by 807 KAR 5:001 Section 10 (7). Staff recommends that the requested adjustment be denied.

Staff recommends that South Shore be allowed to recover actual well amortization expenses. Wells numbered 1, 2, 8, 9, 11, and 12 were cleaned in year 2000 at a cost of \$13,808. Well 9 was again cleaned in year 2001 at a cost of \$1,750. Based on this information Staff determined pro forma amortization expense to be \$3,112 ($\$15,558 / 5$ years) and increased test year expenses by \$1,362 ($\$3,112 - \$1,750$ expense included in the test year).

(E) Hydrant Amortization. South Shore proposed to increase test year expenses to reflect depreciation costs associated with replacing all 18 existing fire hydrants. There are currently no plans for the replacement of the existing hydrants, Staff recommends that the adjustment be denied.

(F) Reservoir Amortization. Pittsburg Tank & Tower Co., Inc. began work on a 37,500 gallon storage tank in May, 2002. The work includes interior and exterior paint and other repairs. Pittsburg Tank s total estimated cost is \$33,260. A breakdown of the cost estimate is included in the Application in Appendix 12. No other bids were received for this work. Pittsburg Tank s bid was accepted by South Shore based upon the recommendation of its contracted engineer and its past experience with Pittsburg Tank.

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South Shore proposed to increase test year expenses to reflect a 10-year amortization of this cost and an equal amount for all four of its other tanks that will be maintained in a similar fashion over the next seven years. South Shore s adjustment is calculated as follows:

Cost of tank maintenance	\$33,260
Times: 5 Tanks	<u>5</u>
Total Cost	166,300
Divide by: 10 years	<u>10</u>
Pro forma	<u>\$16,630</u>

South Shore s adjustment as it relates to the 4 tanks to be serviced in the future does not meet the known and measurable requirement of 807 KAR 5:001 Section 10 (7) and should therefore be denied. Staff is of the opinion that the maintenance costs of the tank currently being serviced should be included in rates.

The bid from Pittsburg Tank included costs for both tank painting and tank maintenance. The tank painting costs of \$18,800 is an expense that should be amortized over 10 years. However, the remaining costs of \$14,460 are capital costs that should be capitalized and depreciated over their useful life. Staff recommends a useful life be assigned to these improvements equal to the anticipated remaining life of the tank which is 50 years as determined by South Shore.

Staff recommends that the bid from Pittsburg Tank be accepted in this case but reminds South Shore that at least three bids should be obtained for future projects to insure that the costs are appropriate.

Staff recommends that operating expenses be increased as follows:

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Reservoir Amortization Expense	
Tank Painting Cost	\$18,800
Divide by: 10 years	<u>10</u>
Adjustment	<u>\$1,880</u>
Depreciation	
Cost of Improvements	\$14,460
Divide by: Depreciable Life	<u>50</u>
Adjustment	<u>\$289</u>

(G) Contracted Services-Engineering. South Shore proposed to adjust test year operating expenses to reflect the 10-year amortization of engineering fees associated with painting all five storage tanks. This adjustment was made in conjunction with the reservoir amortization adjustment as discussed at Item F of this report. As with that adjustment the amounts projected for engineering fees do not meet the known and measurable requirement of state regulation except for those associate with the 37,500 gallon tank that Pittsburg Tank began work on in May, 2002. Staff recommends that the engineering fees related to that tank be used to adjust test year operations.

Engineering fees of \$10,815 will be incurred for design and inspection services for the improvements performed by Pittsburg Tank. The tank improvement costs total \$33,260 and were separated by Staff as amortizable costs in the amount of \$18,800 and depreciable costs of \$14,460. Staff proposes the following adjustment that splits the engineering fees between amortization and depreciation by the same percentages of the improvement costs and allows for their recovery.

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Total engineering fees	\$10,815
Times: Percent of improvement costs amortized	<u>57%</u>
Engineering fees to amortize	6,165
Divide by: 10 year amortization period	<u>10</u>
Annual recovery	616
Less: Test year	<u>(2,437)</u>
Decrease	<u>\$(1,821)</u>
Engineering fees to depreciate	\$4,650
Divide by: Remaining life of reservoir	<u>50</u>
Increase	<u>\$93</u>

(H) Contracted Services Legal. Test year legal fees were incurred in the amount of \$7,089 for a failed attempt to sell the assets of South Shore. South Shore proposed that the entire amount be eliminated when setting rates in this case. Staff agrees and recommends that the Commission accept the adjustment.

South Shore proposed to increase test year expenses by \$2,000 to reflect the three-year amortization of anticipated legal fees related to this case. As of the date of this report South Shore's actual legal fees from the rate application was \$4,305. Based on the actual costs incurred to date, South Shore's estimate of \$6,000 appears to be reasonable. Staff recommends that the Commission accept the adjustment.

South Shore further requested that test year operating expenses be increased by \$425 to reflect the three-year amortization of legal fees in the amount of \$1,274 that were incurred during Case Number 2002-003. In case 2002-003 South Shore filed a complaint with the Commission against the City of Greenup wherein South Shore claimed that the City had violated a contractual agreement to provide water to South Shore. As of the date of this report the actual legal fees related to case 2002-003 incurred by South Shore totaled \$11,026. Staff recommends that test year operating

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expenses be increased by \$3,675 (\$11,026 / 3 years) to reflect the three-year amortization of these legal fees.

The net impact of these adjustments on test year operations is a decrease of \$1,414 ($(\$7,089) + \$2,000 + \$3,675$).

(I) Insurance. South Shore reported test year insurance expense of \$2,898 for a \$150,000 life insurance policy on Mr. Hannah. In case 97-321 the Commission did not allow premiums for a similar policy because Mr. Hannah's wife was the beneficiary. South Shore is now the beneficiary of the policy and argues that the premiums should be recovered because the benefit would be necessary to continue operations in the event of Mr. Hannah's death.

Although South Shore has not specifically related the \$150,000 benefit to any individual costs of replacing Mr. Hannah, Staff agrees that South Shore would incur some non-recurring expenses related to his death. Staff recommends that the Commission allow the premiums in this case but require the proceeds of such policy to be deposited into a cash account separate from all others and used to the benefit of the utility. The Commission should specifically forbid any part of these funds to be distributed to Mr. Hannah's family. Without this limitation Staff recommends that the expense be removed from test year operation.

(J) Payroll Taxes. Staff recommends that test year FICA taxes be decreased by \$2,212 to reflect its pro forma wages and salary adjustments. The adjustment is calculated as follows:

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Pro forma wages	\$128,936
Pro forma salary	<u>49,028</u>
Total	177,964
Times: 7.65 percent	<u>7.65%</u>
Pro forma FICA	13,614
Less: Test year FICA	<u>(15,826)</u>
Decrease	<u><u>\$(2,212)</u></u>

ATTACHMENT C
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STAFF S RECOMMENDED REVENUE REQUIREMENT

Calculation of Operating Ratio

Operating Expenses Net of Income Tax	441,306
Divided by: Operating Ratio	<u>88%</u>
Operating Expenses Net of Income Taxes and Margin Allowed	501,484
Less: Operating Expenses Before Income Taxes	<u>(441,306)</u>
Margin to Include in Revenue Requirement	<u><u>60,178</u></u>

Calculation of Revenue Required from Rates

Operating Expenses Excluding Income Taxes	441,306
Income Taxes	15,582
Operating Margin Allowed	60,178
Other Expenses (Net)	<u>4,084</u>
Total Revenue Requirments	521,150
Less: Other Operating Revenues	<u>(15,475)</u>
Revenue Required from Rates	505,675
Less: Normalized Revenues from Rates	<u>(474,679)</u>
Revenue Increase	<u><u>30,996</u></u>

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STAFF S RECOMMENDED REVENUE REQUIREMENT

Calculation of State and Federal Income Taxes

Income Before Taxes	<u>71,676</u>
State Taxes	
First \$25,000 at 4 percent	1,000
Second \$25,000 at 5 percent	1,250
Over \$50,000 at 6 percent	<u>1,301</u>
Total State Tax	<u><u>3,551</u></u>
Income After State Tax	<u>68,125</u>
Federal Taxes	
First \$50,000 at 15 percent	7,500
Next \$25,000 at 25 percent	4,531
Over \$75,000 at 34 percent	<u>-</u>
Total Federal Tax	<u><u>12,031</u></u>
Total Taxes	<u><u>15,582</u></u>
Net Income After Taxes	<u><u>56,094</u></u>

South Shore requested that its revenue requirements be calculated using a return on rate base formula. The formula included a return on common equity of 15 percent.

There are many problems with setting rates for small investor owned utilities using a return method. The most difficult to overcome is determining a reasonable return on equity. The primary tool used to determine a return component in cases involving large investor owned utilities is a proxy group. A proxy group can be defined as a selection of publicly traded companies whose operations are similar enough in nature to that of the company being analyzed that comparisons of returns required by investors can be reasonably made. It is not possible to formulate such a group for South Shore or other small investor owned utilities. For that reason this Commission

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STAFF S RECOMMENDED REVENUE REQUIREMENT

has used the 88 percent operating ratio method for setting such rates in lieu of a rate of return on rate base. Staff notes that the Commission used the operating ratio method to set South Shores rates in cases 94-188 and 97-321. Staff recommends that the Commission continue to use this methodology in this case.

Attachment D
Staff Report Case No. 2002-00108
Cost of Service Discussion

In seeking to establish fair, just and reasonable rates for a water utility, a sound analysis must be performed that reflects the actual cost of providing water service to each customer classification. That analysis must allocate the costs of providing water service among the customer classes commensurate with their service requirements so that the differences in costs of providing services to different types of customers is recognized. Therefore, to develop a proper rate schedule for South Shore Water Works Company, Commission Staff prepared a cost of service study based on the commodity demand methodology as set out in the American Water Works Association (AWWA) Manual M-1. This study recognizes that a utility must be prepared for meeting peak demand requirements as well as the average water use needs. In other words, a system must be sized to meet the demand of most small usage customers that use very little water throughout the day, but place a burden on the system at the peak times such as mornings and evenings. Most large-usage customers place a more consistent demand on the system by using a constant rate of water throughout the day and night. Therefore, those customers contribute less to a system's strain to meet peak demands.

Retail Rates: South Shore's total revenue requirement is \$521,150. Of this amount \$15,475 is obtained through other operating revenue and \$2,408 is obtained through fire protection rates. The next step is to develop rates that will collect the remaining \$503,267 from the company's retail customers. The utility's

expenses are analyzed and allocated according to three different classifications: Commodity, Demand and Customer.

Commodity costs are those directly associated with the cost of water. The major expense in this classification is purchased power. The only other commodity cost that the company experienced was for the chemicals to treat the water.

Demand costs are those associated with providing the facilities to meet the demands placed on the system. Costs consist of the salaries and other expenses associated with monitoring and maintaining these facilities.

Customer costs are those incurred to serve customers without regard to varying usage. These costs include the salaries and expenses associated with meter reading, billing, collections, accounting expenses and the costs associated with service lines and meters.

Sheet 3 of the following cost of service study shows the allocation of expenses to the functional cost components, Commission Staff utilized information obtained through the utility's application and field reviews to allocate these costs. Administrative and general expenses are allocated to the cost components based on the subtotal of all other expenses, excluding commodity costs. The allocation process results in \$43,834 in commodity costs, \$282,567 in demand costs and \$93,412 in customer costs.

Sheet 5 of the attached Cost of Service Study shows the calculation of the company's retail water rates. Total commodity costs are allocated across the rate steps in accordance with usage percentages. Total demand costs are

allocated across the rate steps in accordance with usage that has been adjusted to reflect the higher peak demands that are caused in the lower rate steps. Total customer costs are all collected in the first rate step, or minimum bill, since those costs do not differ with varying usage.

The total for the first rate step is \$104,054 which is divided by the number of bills issued on an annual bases which calculates to a minimum bill of \$7.61 for the first 1,000 gallons. The totals for the remaining rate steps are each divided by the actual water usage for each rate step to calculate the remainder of the rates.

Commission Staff recommends that the rate schedule be changed from a four step declining block rate to a three step declining block rate. Staff's recommendation is based on usage information provided by the utility in their application, which shows 6.3% of all water sales occur in the usage block of Next 20,000 gallons with an additional 16.3% of all water sales occurring in the usage block of Over 30,000 gallons . The rates associated with these two blocks lead Staff to recommend combining these steps.

Additionally, Staff reviewed the information provided in the utility's application and determined there was not enough information to support two separate fire protection rates. Utilizing information filed with South Shore's application expenses related to fire protection services totaled \$2,408. Dividing this figure by the total number of bills issued on an annual basis for fire protection, the rate for the hydrant charge and the fire line charge should be \$9.12. The full cost of service study for South Shore Water Company follows.

South Shore Water Works Company

Cost of Service Study

Allocation of Plant Value	Sheet 1
Allocation of Depreciation	Sheet 2
Allocation of O/M Expenses	Sheet 3
Allocation of Cost of Service	Sheet 4
Calculation of Water Rates	Sheet 5
Verification of Rates	Sheet 6
Proposed Rates	Sheet 7
Comparison of Rates	Sheet 8

Allocation of Plant Value				
South Shore Water Works Company				
	Total	Commodity	Demand	Customer
Land & Land Rights	\$4,529		\$4,529	
Structures and Improvements	49,752		49,752	
Wells and Springs	269,308		269,308	
Pumping Equipment	94,187		94,187	
Water Treatment Equipment	97,688		97,688	
Distribution Reservoirs & Standpipes	213,622		213,622	
Transmission & Distribution Mains	682,696		682,696	
Services	66,641			\$66,641
Meters & Meter Installations	139,647			139,647
Hydrants	12,907			12,907
Subtotal	\$1,630,977		\$1,411,782	\$219,195
Allocation Percentages	100%		86.6%	13.4%
Office Furniture & Equipment	\$25,914		\$22,442	\$3,472
Tools, Shop & Garage Equipment	21,724		18,813	2,911
Subtotal	\$47,638		\$41,255	\$6,383
Total	\$1,678,615		\$1,453,037	\$225,578
Allocation Percentages	100%		86.6%	13.4%

Source: PSC Annual Report
2001

Allocation of Depreciation				
South Shore Water Works Company				
	Total	Commodity	Demand	Customer
Wells	\$11,296		\$11,296	
Pumping Equipment	3,863		3,863	
Treatment Equipment	4,143		4,143	
Dist. Reservoirs & Standpipes	6,335		6,335	
Transmission & Distribution Mains	7,096		7,096	
Meters	2,680			\$2,680
Hydrants	1,483			1,483
Subtotal	\$36,896		\$32,733	\$4,163
Allocation Percentages	100%		88.7%	11.3%
Office Furniture & Equipment	\$1,950		\$1,730	\$220
Building	1,067		946	121
Tools, Shop & Garage Equip	1,253		1,111	142
Subtotal	\$4,270		\$3,787	\$483
Total	\$41,166		\$36,520	\$4,646
Percentages	100%		88.7%	11.3%

Source: South Shore Application for Rate Adjustment 2002-00108

Allocation of Operation & Maintenance Expense				
South Shore Water Works Company				
	Total	Commodity	Demand	Customer
Salary Field	\$29,475		\$29,475	
Salary Office	36,169		18,085	\$18,084
Salary -Meter Reading	847			847
Salary Operator	29,157		29,157	
Employee Insurance	26,233		21,172	5,061
Pension	1,512		1,224	288
Insurance-Workers Comp	2,495		1,544	951
Power Plant	34,235	34,235		
Chemicals	9,599	9,599		
Materials & Supplies-Plant	15,824		15,824	
Materials & Supplies-Distribution	7,470		7,470	
Materials & Supplies-Office	17,513			17,513
Property Rentals Tanks	850		850	
Well Amortization	3,890		3,890	
Reservoir Amortization	1,880		1,880	
Subtotal	\$217,149	\$43,834	\$130,571	\$42,744
Less Commodity	(\$43,834)			
Total	\$173,315	\$43,834	\$130,571	\$42,744
Allocation Percentages	100%		75%	25%
Salaries & Wages-Admin	\$33,289		\$24,967	\$8,322
Salaries & Wages-Officers	49,028		36,771	12,257
Employee Insurance	22,148		16,611	5,537
Pension	1,298		974	325
Engineering	616		462	154
Accounting	2,600		1,950	650
Legal	5,675		4,256	1,419
Property Rentals Building	9,900		7,425	2,475
Property Rentals Easements	300		225	75
Equipment Rentals	11,842		8,882	2,961
Transportation Expense	6,030		4,523	1,508
Insurance-Vehicles	3,022		2,267	756
Insurance-Property & Liability	5,803		4,352	1,451
Insurance-Workers Comp	2,140		1,605	535
Insurance-Other	2,898		2,174	725
Other Expenses	4,084		3,063	1,021
Income Taxes	15,582		11,687	3,896
Subtotal	\$176,255		\$132,194	\$44,067
Operating Expenses	\$393,404	\$43,834	\$262,765	\$86,811
PSC Assessment	\$1,083		\$812	\$271
Property Taxes	10,880		8,160	2,720
Payroll Taxes	14,439		10,829	3,610
Subtotal	\$26,402		\$19,802	\$6,601
Total Operating Expenses	\$419,806	\$43,834	\$282,567	\$93,412

Source: Field Review 2002

Allocation of Cost of Service				
South Shore Water Works Company				
	Total	Commodity	Demand	Customer
Operation & Maintenance	\$419,806	\$43,834	\$282,567	\$93,412
Operating Ratio	60,178		52,114	8,064
Depreciation	41,166		36,514	4,652
General Water Service Cost	521,150	\$43,834	371,195	106,128
<i>Less:</i>				
Other Operating Revenue	(15,475)		(13,401)	(2,074)
Fire Protection Revenue	(2,408)		(2,408)	
Revenue Required from Rates	\$503,267	\$43,834	\$355,386	\$104,054

NOTES:

Operating Ratio has been allocated on a percentage of Plant Value from Sheet 1.
 Depreciation has been allocated on a percentage of Depreciation from Sheet 2.

Calculation of Water Rates				
South Shore Water Works Company				
	Total	First 1,000 gallons	Next 9,000 gallons	Over 10,000 gallons
Actual Water Sales:				
Thousand Gallons	139,821,000	26,892,000	81,427,000	31,502,000
Percent	100%	19.2%	58.2%	22.5%
Weighted Sales for Demand:		2	1.5	1
Thousand Gallons	207,426,500	53,784,000	122,140,500	31,502,000
Percent	100%	25.9%	58.9%	15.2%
Allocation of Volumetric Costs:				
Commodity	\$43,834	\$8,416	\$25,511	\$9,863
Demand	355,386	92,045	209,322	54,019
Customer	104,054	104,054		
Total	\$503,274	\$204,515	\$234,833	\$63,882
Number of Bills	26,892			
Proposed Rates		\$7.61	\$2.88	\$2.04

Verification of Rates				
South Shore Water Works Company				
	Bills	Gallons	Rate	Revenue
First 1,000 gallons	26,892	26,892,000	\$7.61	\$204,648
Next 9,000 gallons		81,427,000	2.88	234,510
Over 10,000 gallons		31,502,000	2.04	64,264
Total Revenue from Rates				\$503,422
Other Income:				
Other Operating Income				15,475
Fire Protection				\$2,408
Total Operating Revenue	26,892	139,821,000		\$521,305

South Shore Water Works Company			
Proposed Monthly Water Rates			
First 1,000 gallons		\$7.61	Minimum bill
Next 9,000 gallons		2.88	per 1,000 gallons
Over 10,000 gallons		2.04	per 1,000 gallons
Fire Protection Rates			
Hydrant Charge		\$9.12	
Fire Line Charge		\$9.12	

Comparison of Rates				
South Shore Water Works Company				
Gallon Usage	Current Rates	Cost of Service Rates	Increase	Percent
1,000	\$5.90	\$7.61	\$1.71	29.0%
2,000	8.83	10.49	1.66	18.8%
3,000	11.76	13.37	1.61	13.7%
4,000	14.69	16.25	1.56	10.6%
5,000	17.62	19.13	1.51	8.6%
6,000	20.55	22.01	1.46	7.1%
7,000	23.48	24.89	1.41	6.0%
8,000	26.41	27.77	1.36	5.1%
9,000	29.34	30.65	1.31	4.5%
10,000	32.27	33.53	1.26	3.9%
15,000	44.52	43.73	(0.79)	-1.8%
20,000	56.77	53.93	(2.84)	-5.0%
25,000	69.02	64.13	(4.89)	-7.1%
30,000	81.27	74.33	(6.94)	-8.5%
35,000	92.97	84.53	(8.44)	-9.1%
40,000	104.67	94.73	(9.94)	-9.5%
50,000	128.07	115.13	(12.94)	-10.1%
75,000	186.57	166.13	(20.44)	-11.0%
100,000	245.07	217.13	(27.94)	-11.4%
150,000	362.07	319.13	(42.94)	-11.9%
200,000	479.07	421.13	(57.94)	-12.1%
250,000	596.07	523.13	(72.94)	-12.2%
300,000	713.07	625.13	(87.94)	-12.3%
350,000	830.07	727.13	(102.94)	-12.4%

Comparison of Rates			
Block Usage	Current Rates	Block Usage	Proposed rates
First 1,000 gallons	\$5.90	First 1,000 gallons	\$7.61
Next 9,000 gallons	2.93	Next 9,000 gallons	2.88
Next 20,000 gallons	2.45	Over 10,000 gallons	2.04
Over 30,000 gallons	2.34		
Fire Protection Rates			
Hydrant Charge	\$10.45		\$9.12
Fire Line Charge	\$10.45		\$9.12

Effect on Customer Average Bill - 5,000 Gallons Usage			
Current Rates	Proposed Rates	Amount Increase	% Increase
\$17.62	\$19.13	\$1.51	8.60%