

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

|                                     |   |                     |
|-------------------------------------|---|---------------------|
| THE APPLICATION OF GRAYSON COUNTY   | ) |                     |
| WATER DISTRICT FOR AN ADJUSTMENT OF | ) | CASE NO. 2008-00057 |
| RATES FOR WATER SERVICE             | ) |                     |

ORDER

On April 21, 2008, Grayson County Water District (“Grayson”) applied for Commission approval to adjust its retail water service rates. Having performed a limited financial review of Grayson’s operations, Commission Staff has prepared a report of findings and recommendations regarding the proposed rates.

Although Grayson does not propose to adjust its wholesale rate to the city of Caneyville, Commission Staff has recommended that the current wholesale rate of \$1.81 per 1,000 gallons be increased to \$1.94 per 1,000 gallons.<sup>1</sup> Commission Staff found that, in the absence of the performance of a cost-of-service study, the proposed increase in revenue requirement should be proportionately allocated to all Grayson customers.

In light of the Commission Staff’s recommendation, the Commission finds that a copy of this Order, to which a copy of the report is attached, should be served upon Caneyville and that Caneyville should be afforded an opportunity to intervene in this proceeding and to submit comments upon the report.

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<sup>1</sup> Commission Staff further found that, if Grayson sought rates sufficient to fully fund depreciation, its wholesale rate for service to Caneyville should be \$2.00 per 1,000 gallons.


IT IS THEREFORE ORDERED that:

1. The Executive Director shall cause to be served upon Caneyville a copy of this Order and its attachment.
2. All parties shall have 10 days from the date of this Order to file with the Commission written comments regarding and objections to the attached report of Commission Staff's findings and recommendation.
3. Any party wishing an informal conference or hearing in this matter shall file its motion for such hearing or request for informal conference within 10 days of the date of this Order.
4. Caneyville shall have 10 days from the date of this Order to file with the Commission any comments upon the report or to file a motion for intervention in this matter.
5. If no motion for a hearing or intervention or request for informal conference is received within 10 days of the date of this Order, this case will stand submitted to the Commission for decision.

Done at Frankfort, Kentucky, this 6<sup>th</sup> day of August, 2008.

By the Commission

ATTEST:

  
Executive Director *for Stephanie Stumbo*  
*by permission*

Case No. 2008-00057

STAFF REPORT  
ON  
GRAYSON COUNTY WATER DISTRICT  
CASE NO. 2008-00057

On April 21, 2008, Grayson County Water District (“Grayson”) filed an application requesting to increase its rates for water service pursuant to Administrative Regulation 807 KAR 5:001, Section 10. The application was based on the test year ended December 31, 2007. At the end of the test year, Grayson served approximately 6,120 retail customers and one wholesale customer, the city of Caneyville. In its application Grayson proposed to increase its retail rates by 7 percent while holding the wholesale rate constant. The evidence provided in Grayson’s application demonstrates that the proposed rates will produce \$2,810,994 in annual revenue, an increase of \$183,897 over normalized test year revenues of \$2,627,097. Grayson’s proposed rates would increase a customer’s monthly bill using 5,000 gallons through a 5/8-inch x 3/4-inch meter from \$40.59 to \$43.44, an increase of \$2.85 or 7 percent.

Commission Staff (“Staff”) performed a limited financial review of Grayson’s test year operations to determine the reasonableness of Grayson’s requested rates. The scope of Staff’s review was limited to obtaining information as to whether the test year operating revenues and expenses were representative of normal operations. Insignificant or immaterial discrepancies were not pursued and are not addressed herein.

This report summarizes Staff’s findings and recommendations resulting from its review. Jack Scott Lawless is responsible for all portions of this report related to

revenue requirements, and Jason Green is responsible for normalized revenues and rate design.

Attachment A of this report details Grayson's reported test year operations and adjustments proposed thereto by Staff for known and measurable changes as allowed by Administrative Regulation 807 KAR 5:001, Section 10(7). Attachment B provides a detailed calculation of Grayson's revenue requirement as determined by Staff.

As shown in Attachment B, Staff calculated Grayson's revenue requirement from retail and wholesale rates to be \$3,118,869 requiring an increase of \$291,390, or 10.3 percent, over test year revenues from rates of \$2,827,479. To determine the rates for service to generate the revenue requirement, Staff follows the request by Grayson to apply the revenue deficiency evenly to Grayson's rate structure. The resulting rates are shown in Attachment C. These rates would increase a customer's monthly bill using 5,000 gallons through a 5/8-inch x 3/4-inch meter from \$40.59 to \$44.78, an increase of \$4.19 or 10.3 percent.

Although the financial information presented by Staff in this report indicates that Grayson could justify rates in excess of those requested in its application, Staff recommends that the Commission approve the rates requested by Grayson, since they will provide revenues sufficient to pay all pro forma cash expenses as delineated in Attachment A, provide for adequate debt service coverage and fund 82 percent of pro forma depreciation expense as determined by Staff.

Grayson should be allowed an opportunity to request that the Commission grant it approval of the rates calculated by Staff and shown in Attachment C. If Grayson chooses to request such approval, it should do so when filing comments to this report.

In the event that Grayson exercises this option, it shall provide customer notice of the newly requested rates.

The rates calculated by Staff and shown in Attachment C include both retail rates and a wholesale rate determined by applying a 10.3 percent increase to existing rates. The city of Caneyville is Grayson's only wholesale customer. Grayson's current wholesale rate is \$1.81 per thousand gallons. Grayson did not propose an adjustment to this wholesale rate in its application. During Staff's field review, Grayson stated that no adjustment was proposed because a new wholesale rate was being negotiated at the time the application was being prepared and filed. Since negotiations were not final at that time, an adjustment to the wholesale rate was not proposed. Grayson stated that the contract will be submitted for Commission approval when negotiations are complete.

Grayson and Caneyville were still negotiating the wholesale contract as of the date of Staff's report. Although negotiations were not yet final, Grayson stated that the anticipated contract rate will be \$2.15 per thousand gallons.

The rates calculated by Staff as shown in Attachment C include a new wholesale rate of \$2 per 1,000 gallons. This rate was determined independent of the contract negotiations between Grayson and Caneyville. It was calculated by applying the same percentage increase to the current wholesale rate as applied to calculate the retail rates included in Attachment C. Absent a cost-of-service study or recent wholesale contract, it is Staff's opinion that the wholesale rate should be adjusted by the same percentage as the retail rates. This approach is necessary to properly allocate a proportionate share of Grayson's required revenue increase to all water sales customers.

Like the retail rates shown in Attachment C, Staff does not recommend that the Commission allow Grayson to charge the \$2 wholesale rate unless Grayson adopts the rate when providing comments to this report and provides notice to its wholesale customer of this rate. In the event that Grayson does not make such adoption, Staff recommends that the current wholesale rate of \$1.81 be increase by 7 percent to \$1.94 so as to pass a proportionate share of the rate increase requested by Grayson onto the wholesale customer.

Staff expects this wholesale rate to again be adjusted after Grayson and Caneyville submit their negotiated wholesale contract to the Commission for consideration. Assuming that the negotiated contract rate will be the anticipated \$2.15, it is Staff's position that such a wholesale rate change will not have a material impact on Grayson's operations and would not materially alter the findings of Staff's report in this case. To demonstrate, during the test year Caneyville purchased 45,261,000 gallons from Grayson. At Staff's recommended rate of \$1.94, this volume of sales results in annual revenue for Grayson of \$87,806. The revenue would grow by \$9,505 to \$97,311 at the \$2.15 rate. This increase in wholesale revenue represents .29 ( $\$9,505 / \$3,272,729$ ) percent of Grayson's revenue requirement as determined by Staff in Attachment B. The impact would be even less if Grayson adopts the rates shown in Attachment C.

In summary, Staff recommends that Grayson's proposed rates for retail service be approved and that its wholesale rate be increased from \$1.81 per 1,000 gallons to \$1.94. Alternatively, Grayson may adopt the rates determined by Staff and included

in this report at Attachment C when commenting on this report. Such adoption would require additional customer notice.

Signatures:

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Prepared by: Jack Scott Lawless, CPA  
Branch Manager  
Financial Audit Branch  
Division of Financial Analysis

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Prepared by: Jason Green  
Rate Analyst, Communications, Water,  
and Sewer Rate Design Branch  
Division of Financial Analysis

ATTACHMENT A  
STAFF REPORT CASE NO. 2008-00057  
STAFF'S ADJUSTED OPERATIONS

|   | Test<br>Year      | Adjustment       | Ref. | Pro forma         |
|---|-------------------|------------------|------|-------------------|
| <b>Operating Revenues</b>                       |                   |                  |      |                   |
| Sales of Water                                  |                   |                  |      |                   |
| Metered Water                                   | \$ 2,827,479      |                  | (A)  | \$ 2,827,479      |
| <b>Total Sales of Water</b>                     | <b>2,827,479</b>  |                  |      | <b>2,827,479</b>  |
| Other Operating Revenues                        |                   |                  |      |                   |
| Forfeited Discounts                             | 51,943            |                  |      | 51,943            |
| Miscellaneous Service Revenues                  | 129,309           | \$ (80,275)      | (B)  | 49,034            |
| Rents from Water Property                       |                   | 19,500           | (C)  | 19,500            |
| <b>Total Other Operating Revenues</b>           | <b>181,252</b>    | <b>(60,775)</b>  |      | <b>120,477</b>    |
| <b>Total Operating Revenues</b>                 | <b>3,008,731</b>  | <b>(60,775)</b>  |      | <b>2,947,956</b>  |
| <b>Operating Expenses</b>                       |                   |                  |      |                   |
| Operation and Maintenance Expenses              |                   |                  |      |                   |
| Employee Wages                                  | 540,318           | (723)            | (D)  | 539,595           |
| Benefits and Payroll Taxes                      | 240,695           | 1,733            | (E)  | 242,428           |
| Purchased Water                                 | 316,021           | 5,638            | (F)  | 321,659           |
| Purchased Power                                 | 76,671            |                  |      | 76,671            |
| Chemicals                                       | 92,228            |                  |      | 92,228            |
| Materials and Supplies                          | 141,802           | (56,893)         | (G)  | 84,909            |
| Contractual Services - Legal, Acct., & Eng.     | 11,835            |                  |      | 11,835            |
| Contractual Services - Management               | 75,240            |                  |      | 75,240            |
| Contractual Services - Other                    | 65,062            | (21,112)         | (H)  | 43,950            |
| Rental of Building                              | 11,010            |                  |      | 11,010            |
| Rental of Equipment                             | 11,146            |                  |      | 11,146            |
| Transportation                                  | 59,670            |                  |      | 59,670            |
| Insurance - Other                               | 35,934            |                  |      | 35,934            |
| Advertising Expenses                            | 574               |                  |      | 574               |
| Bad Debt Expense                                | 6,041             |                  |      | 6,041             |
| Miscellaneous Expenses                          | 70,899            | (2,883)          | (I)  | 68,016            |
| <b>Total Operation and Maintenance Expenses</b> | <b>1,755,146</b>  | <b>(74,240)</b>  |      | <b>1,680,906</b>  |
| Depreciation                                    | 532,088           | (1,405)          | (J)  | 530,683           |
| Amortization Expense                            | 3,821             | 4,850            | (K)  | 8,671             |
| PSC Assessment Tax                              | 4,511             | -                |      | 4,511             |
| <b>Total Operating Expenses</b>                 | <b>2,295,566</b>  | <b>(70,795)</b>  |      | <b>2,224,771</b>  |
| Utility Operating Income                        | 713,165           | 10,020           |      | 723,185           |
| Plus: Interest and Dividend Income              | 33,383            |                  |      | 33,383            |
| <b>Income Available to Service Debt</b>         | <b>\$ 746,548</b> | <b>\$ 10,020</b> |      | <b>\$ 756,568</b> |



(A) Water Sales. During the test year, Grayson reported water sales from retail and wholesale customers at \$2,743,887 and \$83,592, respectively. At Exhibit 9 of its application, Grayson presented a billing analysis where test year retail sales volumes were priced out at Grayson's present retail rates. Through the billing analysis, Grayson calculated its test year retail sales to be \$2,627,097. Based on the billing analysis, Grayson proposed an adjustment to decrease reported test year retail sales by \$116,790. Grayson did not provide a reconciliation of the billing analysis results and reported revenues.

Grayson's billing analysis variance to reported test year water sales is 4.26 percent ( $\$116,790 / \$2,743,887$ ). Since Grayson did not provide explanation or reconciliation of the variance, Staff performed its own billing analysis. The results of Staff's analysis are summarized below.

|                               | Gallons     | Revenue      |
|-------------------------------|-------------|--------------|
|                               | Sold        |              |
| 3/4" Residential              | 197,938,038 | \$ 1,938,374 |
| 3/4" Residential              | 25,777,330  | 255,403      |
| 3/4" Non-Residential          | 34,200      | 347          |
| 1" Non-Residential            | 11,439,810  | 75,603       |
| 1 1/2" Non-Residential        | 10,912,700  | 59,766       |
| 2" Non-Residential            | 58,713,700  | 314,958      |
| 3" Non-Residential            | 15,982,800  | 83,638       |
| 4" Non-Residential            | 1,522,000   | 11,076       |
| 6" Non-Residential            | 739,000     | 15,437       |
| Wholesale                     | 45,261,000  | 81,922       |
| Total                         | 368,320,578 | 2,836,526    |
| Less: Test Year Metered Sales |             | (2,827,479)  |
| Variance                      |             | \$ 9,047     |
| Variance Percent to Test Year |             | -0.32%       |

As shown in the summary above, the results of Staff's billing analysis are within .32 percent of reported water sales. Based on this analysis, Staff is of the opinion that reported test year water sales are fairly presented and require no adjustment.

(B) Miscellaneous Service Revenues. During the test year, Grayson collected tap fees totaling \$80,275. Grayson erroneously reported these collections as miscellaneous service revenues. They should have been reported as contributions in aid of construction and excluded from the determination of Grayson's operating revenues. Accordingly, Staff decreased test year miscellaneous service revenues by \$80,275 to properly account for test year tap fee collections.

(C) Rents from Water Property. During the test year, Grayson collected rental income from Nextel in the amount of \$19,500 for use of a water tank as an antenna mount. This income was reported below the line in non-utility income. It should have been reported above the line as rents from water property. Accordingly, Staff increased test year rents from water property by \$19,500.

(D) Salaries and Wages – Employees. Grayson reported test year salaries and wages – employees at \$540,318. Grayson has no employees. All employee services are performed by employees of Warren Rural Electric Cooperative Corporation ("WRECC"). WRECC employees directly assign time spent performing duties for Grayson on their time cards. Grayson is then billed for these services at the employees' hourly wage rates. Grayson reports these charges as salaries and wages. Staff determined that test year salaries and wages - employees should be decreased by \$723 as shown below.

|  |  |  |  |  |  |            |
|--|--|--|--|--|--|------------|
| Pro forma wages  |  |  |  |  |  | \$ 562,977 |
| Less: Corretion of accounting error (labor portion of capitalized meter installations) |  |  |  |  |  | (23,382)   |
| Pro forma wages expense  |  |  |  |  |  | 539,595    |
| Less: Test year  |  |  |  |  |  | (540,318)  |
| Adjustment   |  |  |  |  |  | \$ (723)   |

Staff calculated pro forma wages to be \$562,977 by pricing all test year employee hours assigned to Grayson at the WRECC employee wage rates effective subsequent to the July 1, 2008 wage rate increase of 2.8 percent.

Staff removed \$23,382 from pro forma wages to correct a portion of a test year accounting error related to the cost of new meter installations. The accounting error totals \$80,275 and is related to the previous adjustment recommended by Staff to reclassify tap fee collections from miscellaneous service revenues as contributions in aid of construction. Tap fee collections represent recovery of the labor and supply costs incurred to install new meter connections. When these collections were received and recorded, an equal amount was capitalized and reported as utility plant in service. However, due to an accounting error, these costs are also included in test year operating expenses. This recording represented a second recording of the same costs. As discussed at item G of this attachment, materials and supplies expenses were decreased by \$56,893 to correct the portion of the error charged to materials expenses. Staff removed the remaining balance of the error, \$23,382, from wages to correct the remainder of the error. Staff's approach eliminates the effects of the entire error from pro forma operations.

(E) Benefits and Payroll Taxes. Staff increased test year FICA taxes by \$1,733, as shown below, to account for Staff's recommended increase to test year wages.

|                                   |  |  |           |
|-----------------------------------|--|--|-----------|
| Pro forma Wages                   |  |  | \$562,977 |
| Less: Test year                   |  |  | (540,318) |
|                                   |  |  |           |
| Wages Adjustment for Tax Purposes |  |  | 22,659    |
| Times: Tax Rate                   |  |  | 7.65%     |
|                                   |  |  |           |
| Adjustment                        |  |  | \$ 1,733  |
|                                   |  |  |           |

Since the accounting error related to the double counting of the cost of meter installations was entirely corrected through the pro forma wages and materials expense accounts, FICA taxes were calculated using pro forma wages before the correction. Otherwise, FICA taxes to be paid would be understated, resulting in an understatement of pro forma operating expenses.

(F) Purchased Water. To meet its test year annual water sales demand, Grayson produced 254,769,000 gallons of water and purchased 175,328,860 gallons from the city of Leitchfield. Test year wholesale purchases from Leitchfield totaled \$316,021. Effective to test year purchases beginning in February, Leitchfield increased the wholesale rate charged to Grayson by 26.49 percent from \$1.44 per 1,000 gallons to \$1.82. To annualize this test year wholesale rate increase, Staff increased January sales of \$21,287 by 26.49 percent, or \$5,638.

As of the date of Staff's report, Leitchfield had not amended its wholesale rate on file with the Commission to include the \$1.82 wholesale rate placed into effect and charged to Grayson during the test year. In Staff's opinion letter dated November 21, 2007 to David B. Vickery, Esq., Staff recommended that Leitchfield file such tariff amendments prior to placing new wholesale rates into effect. Although Leitchfield has not followed Staff's recommendation with regard to the current rate of \$1.82, Staff recognizes this increase in wholesale water costs when calculating Grayson's revenue

requirements, since Grayson's engineers concurred with the calculation of this rate as noted in Staff's letter dated November 21, 2007.

(G) Materials and Supplies. Grayson reported test year materials and supplies expense of \$141,802. Of this amount, \$56,893 was reported in account 620.7 – materials and supplies - customer operating expenses. The entire amount reported in account 620.7 was for the purchase of the meter supplies necessary to make new meter connections to Grayson's distribution system. Due to an error in Grayson's accounting system, the amounts reported in this account represent a second recording of new meter connection costs. These costs were also capitalized in account 334 – meters and meter installations. Proper accounting requires these costs to be capitalized. Therefore, to correct the accounting error and eliminate the double accounting, Staff decreased materials and supplies expenses by \$56,893.

Staff discussed this accounting error with Grayson's Certified Public Accountant, Karen VanMeter. She and WRECC's employees have made the necessary changes to Grayson's accounting system to ensure that this error does not recur in the future periods.

(H) Contractual Services - Legal, Accounting, and Engineering and Contractual Services - Other. During the test year, Grayson reported engineering and legal fees totaling \$9,729 related to the preparation of the rate application filed in this case and to negotiations of wholesale water contracts. These fees were expensed with charges to contractual services – legal, accounting, and engineering and contractual services – other.

Proper accounting for these fees requires they be deferred and amortized over the anticipated period of time the rates for water service they helped develop will be charged. For amortization purposes, Staff assumed a three-year life decreasing test year expenses by \$6,486 ( $\$9,729 / 3 = \$3,243 - \$9,729$ ). Although these test year expenses were divided between two general ledger accounts, Staff made the entire adjustment to contractual services – other to simplify the adjustment.

Also, reported in these two accounts were \$14,626 for engineering services related to Grayson's long-range capital plan and hydraulic models. Proper accounting for these expenditures requires that they be capitalized and depreciated. Accordingly, Staff eliminated these items from test year operating expenses and provided for a provision for their recovery in pro forma depreciation expense. Although these items were recorded in two separate accounts, Staff adjusted only contractual services – other to simplify the adjustment.

Staff's net decrease to contractual services – other is \$21,112 ( $\$6,486 + \$14,626$ ).

(I) Miscellaneous Expenses. Staff identified the following items charged to test year miscellaneous expenses that should have been reported below the line in miscellaneous non-utility expenses. Accordingly, Staff decreased test year miscellaneous expenses by \$2,883.

| Vendor                             | Check Number | Amount     |
|------------------------------------|--------------|------------|
| Farmer's Quality Meats             | 8515         | (158)      |
| Grayson County Chamber of Commerce | 8896         | (400)      |
| Farmer's Quality Meats             | 9114         | (40)       |
| For Myself Floral Designs          | 9116         | (53)       |
| Farmer's Quality Meats             | 9205         | (69)       |
| Farmer's Quality Meats             | 9239         | (50)       |
| The Centre on Main                 | 9257         | (25)       |
| Farmer's Quality Meats             | 9284         | (102)      |
| Farmer's Quality Meats             | 9305         | (142)      |
| National Turkey Federation         | 9322         | (36)       |
| Wal-Mart                           | 9422         | (23)       |
| Wilson & Muir Bank                 | 9423         | (73)       |
| Wilson & Muir Bank                 | 9432         | (17)       |
| Beth Riley                         | 9435         | (80)       |
| Danielle Davis                     | 9436         | (80)       |
| Brenda's Catering                  | 9440         | (788)      |
| The Centre on Main                 | 9450         | (155)      |
| Wal-Mart                           | 9471         | (159)      |
| Wilson & Muir Bank                 | 9511         | (402)      |
| Petty Cash                         | 9532         | (30)       |
| Total                              |              | \$ (2,883) |

(J) Depreciation. Depreciation is an accounting principal designed to recognize the cost of an asset over the asset's estimated useful life. Pursuant to an order of the Supreme Court of Kentucky, a water district is entitled to recover depreciation as a means to fund renewals and replacements of service.<sup>2</sup>

Grayson reported test year depreciation expense of \$532,088, which was calculated by applying a composite rate of 2.05 percent to the gross value of plant in service at test year end. As a part of its review, Staff analyzed Grayson's method of calculating depreciation and applied procedures to determine the reasonableness of its level of test year depreciation expense.

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<sup>2</sup> See Public Serv. Comm'n of Kentucky v. Dewitt Water Dist., 720 S.W.2d 725, 728 (Ky.1986).

When calculating test year depreciation expense, Grayson erroneously applied its 2.05 percent composite depreciation rate to all plant in service at test year end including land and land rights. Land is not a depreciable asset and is not properly includable in the calculation of depreciation. By dividing Grayson's reported test year depreciation expense of \$532,088 by test year end depreciable plant in service of \$25,723,899, Staff determined that Grayson's test year composite depreciation rate was actually 2.07 percent. Staff used the 2.07 percent composite rate to test the reasonableness of Grayson's level of test year depreciation expense.

By accruing depreciation annually at a composite rate of 2.07 percent, Grayson will accumulate depreciation equal to its depreciable plant costs in 48.31 years, the estimated overall weighted average useful life of its depreciable assets. The useful lives of a utility's assets are difficult to estimate because many factors impact the length of time an asset remains in service. The most accurate approach to estimate useful lives is to conduct a depreciation study using standards acceptable to the Society of Depreciation Professionals. Recognizing the significant expense to conduct such studies and the need for small utilities with limited funds such as Grayson to efficiently and effectively manage cash, the Commission has developed an alternative method to test the reasonableness of their depreciation practices. The Commission compares depreciation practices of these utilities to the findings of a study conducted by the National Association of Regulatory Utility Commissioners ("NARUC") entitled Depreciation Practices for Small Water Utilities dated August 15, 1979 ("NARUC Study").



Among its findings, the NARUC Study identified acceptable useful life ranges for each utility plant account group listed in NARUC’s water utility Uniform Systems of Accounts. The Commission generally finds a water district’s facilities’ estimated useful lives reasonable if they fall within the life ranges found acceptable in the NARUC Study.

To compare the overall composite rate used by Grayson to the NARUC Study, Staff recalculated Grayson’s depreciation expense by applying to each of Grayson’s asset groups the shortest, mid-point, and longest lives included in the life ranges found appropriate in the NARUC Study. These results were then divided by gross depreciable plant in service at test year end to calculate the overall composite depreciation rate resulting from each set of lives. A comparison of Grayson’s 2.07 percent composite rate to those calculated by Staff is shown below.

|                        | Composite Rate | Resulting Expense | Change in Depreciation to Grayson's Rate |
|------------------------|----------------|-------------------|--|
| Longest Life in Range  | 2.01%          | 515,819           | \$ (16,666)                              |
| <b>Used by Grayson</b> | <b>2.07%</b>   | <b>\$ 532,485</b> |  |
| Mid-Point of Range     | 2.28%          | 586,002           | 53,517                                   |
| Shortest Life in Range | 2.72%          | 698,645           | 166,160                                  |

As shown above, the range found reasonable through Staff’s analysis is 2.01 percent to 2.72 percent. While the composite rate used by Grayson falls within this range, Staff recommends that an adjustment be made to Grayson’s test year composite rate.

Normally, absent evidence supporting an alternative composite rate, Staff would recommend that depreciation be calculated using the mid-point of the life ranges found reasonable in the NARUC Study. Staff determined Grayson’s composite rate based on the mid-points to be 2.28 percent. However, in this case Staff does not propose an

adjustment to the 2.28 percent rate. Instead, Staff recommends that Grayson begin calculating depreciation expense using the 2.01 percent composite rate based on longest lives included in the ranges of the NARUC Study.

Since Staff recommended that the Commission approve the rates for water service proposed by Grayson and those rates do not fully fund depreciation as calculated by Grayson, an adjustment to Grayson's depreciation rate to the mid-point of the life range would increase depreciation expense, resulting in additional under-recovery of depreciation. While Staff's recommended adjustment using a composite rate of 2.01 based upon the longest life range recommended by NARUC also results in unrecovered depreciation at Staff's recommended rates for water service, it minimizes under-recovery to the greatest extent possible while keeping depreciable lives within the range of reasonableness found using the NARUC Study.

Staff decreased test year depreciation by \$16,666 to account for the 2.01 percent composite depreciation rate recommended by Staff.

Staff increased test year depreciation expense by \$16,796 to include depreciation on the professional services previously capitalized by Staff in this report and to include depreciation on three major plant additions brought into service subsequent to the end of the test year. Staff applied the 2.01 composite rate to calculate depreciation on these items. The calculation is shown below.

|  |  |  |  |  |           |
|--|--|--|--|--|-----------|
| Test Year Engineering Services for Capital Plan and Hydraulic Analysis |  |  |  |  | \$ 14,626 |
| Post Test Period Plant Additions                                       |  |  |  |  |           |
| Project 16   |  |  |  |  | 296,000   |
| New Warehouse  |  |  |  |  | 349,000   |
| Replaced 1,252 Existing Meters with Radio Read Meters                  |  |  |  |  | 178,000   |
|  |  |  |  |  |           |
| Total  |  |  |  |  | 837,626   |
| Times: Composite Depreciation Rate                                     |  |  |  |  | 2.01%     |
|  |  |  |  |  |           |
| Adjustment   |  |  |  |  | \$ 16,796 |
|  |  |  |  |  |           |

In conjunction with the capitalization and inclusion of depreciation on the 1,252 replacement meters shown above, an adjustment must be made to eliminate depreciation expense taken on the meters that were removed from service. To make this adjustment, Staff assumes that all the removed meters were among the first 1,252 meters placed into service. To determine the cost of these meters, Staff referred to previous annual reports filed by Grayson. The earliest report that included at least 1,252 meter connections is the 1986 report where 1,281 meters were reported at a cost of \$77,685 or \$61 per meter. Staff then determined the cost of the retired meters to be \$76,372 (1,252 x \$61), requiring a decrease to depreciation expense of \$1,535 (\$76,372 x 2.01 percent). Assuming no salvage or cost of removal, the journal entry Grayson should record to account for the retirement of these meters is shown below.

|                          |          |          |
|--------------------------|----------|----------|
|                          | Dr.      | Cr.      |
| Accumulated Depreciation | \$76,372 |          |
| Meters                   |          | \$76,372 |

As shown below, the aforementioned adjustments to test year depreciation expense result in an overall decrease to test year expenses of \$1,405.

|                             |                  |
|-----------------------------|------------------|
| 2.01 Percent Composite Rate | \$(16,666)       |
| Plant Additions             | 16,796           |
| Plant Retirements           | <u>(1,535)</u>   |
| Total                       | <u>\$(1,405)</u> |

(K) Amortization. On March 3, 2008, Grayson's Board of Commissioners accepted a bid from Preferred Tank & Tower Co. to sandblast and paint the "Duff Tank." The accepted bid was the lowest received at \$97,000. Grayson estimates the life of this tank painting to be 20 years. Accordingly, Staff recommends test year expenses be increased by \$4,850 ( $97,000 / 20$ ) to allow Grayson recovery of the "Duff Tank" painting costs over a 20-year period.

ATTACHMENT B  
STAFF REPORT CASE NO. 2008-00057  
CALCULATION OF REVENUE REQUIREMENT

|   |  |  |            |  |              |
|---|--|--|------------|--|--------------|
| Pro forma Operating Expense                   |  |  |            |  | \$ 2,224,771 |
| Debt Service Subject to Coverage Requirements |  |  |            |  |              |
| Rural Development Bond, 1995                  |  |  | \$ 109,938 |  |              |
| Rural Development Bond, 1997                  |  |  | 82,528     |  |              |
| Rural Development Bond, 1999                  |  |  | 55,002     |  |              |
| Rural Development Bond, 2002                  |  |  | 29,908     |  |              |
| Rural Development Bond, 2005                  |  |  | 69,508     |  |              |
| Kentucky Infrastructure Authority, F01-02     |  |  | 241,573    |  |              |
| Kentucky Rural Water Finance Corp., 2001      |  |  | 44,529     |  |              |
| Kentucky Rural Water Finance Corp., 2004      |  |  | 234,847    |  |              |
| Total Debt Service                            |  |  |            |  | 867,833      |
| Debt Service Coverage at 20 percent           |  |  |            |  | 173,567      |
| Debt not Subject to Coverage Requirements     |  |  |            |  |              |
| Backhoe                                       |  |  |            |  | 6,559        |
| Total Revenue Requirement                     |  |  |            |  | 3,272,729    |
| Less: Other Operating Revenue                 |  |  |            |  | (120,477)    |
| Interest and Dividend Income                  |  |  |            |  | (33,383)     |
| Revenue Required from Rates                   |  |  |            |  | 3,118,869    |
| Less: Pro forma Present Rate Water Sales      |  |  |            |  | (2,827,479)  |
| Required Rate Increase                        |  |  |            |  | \$ 291,390   |
| Percentage Increase                           |  |  |            |  | 10.31%       |

Grayson's bond resolutions require maintenance of "net revenues" equal to 120 percent of its average annual principal and interest payments on all parity bonds. Recognizing this requirement, Staff determined Grayson's total revenue requirement to be \$3,272,729 by adding Grayson's pro forma expenses to its three-year average principal and interest payments on all debt and an additional 20 percent of the average principal and interest payments on parity bonds. Staff then subtracted pro forma other operating revenues and interest income from total revenue requirements to determine the revenue requirements from rates for service.

## ATTACHMENT C RATES CALCULATED BY STAFF

### Monthly Water Rates

#### 5/8" x 3/4" Meters

|          |         |         |    |       |                   |
|----------|---------|---------|----|-------|-------------------|
| First    | 1,500   | gallons | \$ | 16.85 | minimum bill      |
| Next     | 8,500   | gallons |    | 7.98  | per 1,000 gallons |
| Next     | 40,000  | gallons |    | 7.15  | per 1,000 gallons |
| Next     | 100,000 | gallons |    | 6.32  | per 1,000 gallons |
| All over | 150,000 | gallons |    | 5.52  | per 1,000 gallons |

#### 3/4" Meters

|          |         |         |    |       |                   |
|----------|---------|---------|----|-------|-------------------|
| First    | 3,000   | gallons | \$ | 28.82 | minimum bill      |
| Next     | 7,000   | gallons |    | 7.98  | per 1,000 gallons |
| Next     | 40,000  | gallons |    | 7.15  | per 1,000 gallons |
| Next     | 100,000 | gallons |    | 6.32  | per 1,000 gallons |
| All over | 150,000 | gallons |    | 5.52  | per 1,000 gallons |

#### 1" Meters

|          |         |         |    |       |                   |
|----------|---------|---------|----|-------|-------------------|
| First    | 5,000   | gallons | \$ | 44.77 | minimum bill      |
| Next     | 5,000   | gallons |    | 7.98  | per 1,000 gallons |
| Next     | 40,000  | gallons |    | 7.15  | per 1,000 gallons |
| Next     | 100,000 | gallons |    | 6.32  | per 1,000 gallons |
| All over | 150,000 | gallons |    | 5.52  | per 1,000 gallons |

#### 1 1/2" Meters

|          |         |         |    |       |                   |
|----------|---------|---------|----|-------|-------------------|
| First    | 10,000  | gallons | \$ | 84.65 | minimum bill      |
| Next     | 40,000  | gallons |    | 7.15  | per 1,000 gallons |
| Next     | 100,000 | gallons |    | 6.32  | per 1,000 gallons |
| All over | 150,000 | gallons |    | 5.52  | per 1,000 gallons |

#### 2" Meters

|          |         |         |    |        |                   |
|----------|---------|---------|----|--------|-------------------|
| First    | 16,000  | gallons | \$ | 127.54 | minimum bill      |
| Next     | 34,000  | gallons |    | 7.15   | per 1,000 gallons |
| Next     | 100,000 | gallons |    | 6.32   | per 1,000 gallons |
| All over | 150,000 | gallons |    | 5.52   | per 1,000 gallons |

#### 3" Meters

|          |         |         |    |        |                   |
|----------|---------|---------|----|--------|-------------------|
| First    | 30,000  | gallons | \$ | 227.60 | minimum bill      |
| Next     | 20,000  | gallons |    | 7.15   | per 1,000 gallons |
| Next     | 100,000 | gallons |    | 6.32   | per 1,000 gallons |
| All over | 150,000 | gallons |    | 5.52   | per 1,000 gallons |

#### 4" Meters

|          |         |         |    |        |                   |
|----------|---------|---------|----|--------|-------------------|
| First    | 50,000  | gallons | \$ | 370.56 | minimum bill      |
| Next     | 100,000 | gallons |    | 6.32   | per 1,000 gallons |
| All Over | 150,000 | gallons |    | 5.52   | per 1,000 gallons |

#### 6" Meters

|          |         |         |    |        |                   |
|----------|---------|---------|----|--------|-------------------|
| First    | 100,000 | gallons | \$ | 686.59 | minimum bill      |
| Next     | 50,000  | gallons |    | 6.32   | per 1,000 gallons |
| All Over | 150,000 | gallons |    | 5.52   | per 1,000 gallons |

#### 8" Meters

|          |         |         |    |          |                   |
|----------|---------|---------|----|----------|-------------------|
| First    | 150,000 | gallons | \$ | 1,002.61 | minimum bill      |
| All Over | 150,000 | gallons |    | 5.52     | per 1,000 gallons |

#### 10" Meters

|          |        |         |    |          |                   |
|----------|--------|---------|----|----------|-------------------|
| First    | 250000 | gallons | \$ | 1,554.14 | minimum bill      |
| All Over | 250000 | gallons |    | 5.52     | per 1,000 gallons |

#### Wholesale

|                    |  |  |    |      |                   |
|--------------------|--|--|----|------|-------------------|
| City of Caneyville |  |  | \$ | 2.00 | per 1,000 gallons |
|--------------------|--|--|----|------|-------------------|