

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF NORTH MERCER )  
WATER DISTRICT FOR RATE ADJUSTMENT ) CASE NO.  
MADE PURSUANT TO 807 KAR 5:076 ) 2016-00325

NOTICE OF FILING OF COMMISSION STAFF REPORT

Notice is hereby given that, in accordance with the Commission's Order of December 27, 2016, the attached report containing the findings of Commission Staff regarding the Applicant's proposed rate adjustment has been filed in the record of the above-styled proceeding. Pursuant to the Commission's December 27, 2016 Order, North Mercer Water District is required to file written comments regarding the findings of Commission Staff no later than 14 days from the date of this report.



Talina Mathews  
Executive Director  
Public Service Commission  
P.O. Box 615  
Frankfort, KY 40602

DATE MAR 22 2017

cc: Parties of Record

STAFF REPORT  
ON  
NORTH MERCER WATER DISTRICT  
CASE NO. 2016-00325

North Mercer Water District ("North Mercer") is a water utility district organized pursuant to KRS Chapter 74 that owns and operates a water distribution system through which it provides retail water service to approximately 4,518 customers that reside in the Kentucky counties of Anderson, Boyle, Mercer, and Washington.<sup>1</sup> On November 16, 2016, North Mercer tendered an application ("Application") to the Commission requesting to increase its water service rates pursuant to 807 KAR 5:076. After North Mercer corrected a deficiency, its Application was deemed filed on December 9, 2016. To ensure the orderly review of the Application, the Commission established a procedural schedule by Order dated December 27, 2016.

North Mercer based its requested rates on a historical test period that coincides with the reporting period shown in its most recent Annual Report on file with the Commission at the time it filed the Application, the calendar year ended December 31, 2015, as required by 807 KAR 5:076, Section 9.

The rates requested by North Mercer would increase the monthly bill of a typical residential customer<sup>2</sup> by \$7.74, from \$36.86 to \$44.60, or 20.9 percent, and would generate \$481,314 in additional annual water sales revenues, a 24.41 percent increase.

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<sup>1</sup> *Annual Report of North Mercer Water District to the Public Service Commission for the Calendar Year Ended December 31, 2015 ("Annual Report")* at 12 and 53.

<sup>2</sup> A typical residential customer purchases 4,000 gallons of water per month through a 5/8-inch x 3/4-inch meter.

North Mercer presented financial exhibits in the Application that show how North Mercer calculated the amount of the requested revenue increase. The exhibits are summarized below in condensed form.

Pro Forma Operating Expenses	\$1,963,975
Plus: Average Annual Principal and Interest Payments	472,088
Additional Working Capital	<u>90,419</u>
Overall Revenue Requirement	2,526,482
Less: Other Operating Revenue	(63,514)
Interest Income	<u>(10,078)</u>
Revenue Required From Rates	2,452,890
Less: Pro Forma Present Rate Service Revenues	<u>(1,971,576)</u>
Required Revenue Increase	<u>\$ 481,314</u>
Percent Increase	<u>24.41%</u>

To determine the reasonableness of the rates requested by North Mercer, Staff performed a limited financial review of North Mercer's test-year operations. The scope of Staff's review was limited to determining whether operations reported for the test year were representative of normal operations. Known and measurable changes to test-year operations were identified and adjustments were made when their effects were deemed to be material. Insignificant and immaterial discrepancies were not necessarily pursued or addressed.

Staff's findings are summarized in this report. David Foster reviewed the calculation of North Mercer's Overall Revenue Requirements. Jason Green reviewed North Mercer's reported revenues and rate design.

## Summary of Findings

1. Overall Revenue Requirement and Required Revenue Increase. By applying the Debt Service Coverage (“DSC”) method, as generally accepted by the Commission, Staff found that North Mercer’s Overall Revenue Requirement is \$2,372,234 and that a \$336,064 revenue increase, or 17.12 percent, to pro forma present rate revenues, is necessary to generate the Overall Revenue Requirement.

2. Water Service Rates. North Mercer currently uses a five-step declining block rate design for customers on all meter sizes. North Mercer has approximately 4,122 customers served by a 5/8-inch meter connection, 32 customers served by a 1-inch meter connection, and three customers served by a 2-inch meter connection. North Mercer proposes to replace its existing five-step declining block rate structure with a two-rate tier with higher minimum bills for its customers with larger meter sizes. North Mercer states that the proposed revised rate design will encourage conservation and will eliminate the subsidy currently being given to large-volume customers.<sup>3</sup> Commission Staff performed a cost-of-service study (“COSS”) based upon the Commodity-Demand method, as set out in the American Water Works Association Manual M-1, fifth edition, which the Commission has generally accepted for rate-design purposes, to allocate allowable expenses to the various rate blocks. Minimum usage levels for larger meter sizes are typically set by demand ratios in comparison to a 5/8-inch meter. Staff finds that North Mercer’s minimum usage levels for 1-inch and 2-inch meters should be revised to reflect the differing demand ratios of the various meter sizes. This revision will promote fairness and equity to the utility’s various classifications of customers, while recovering the costs associated with providing

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<sup>3</sup> Application, Reasons for Rate Increase

service to those classes of customers. The Commission has historically accepted declining block rate designs as a fair and reasonable rate structure to reflect differences in water and capacity use of different classes of customers. The rates in Attachment A to this report reflect Staff's rate design revisions and are based on Staff's COSS, which is reflected in Attachment C. These rates will produce revenues from water sales of \$2,299,758 and will provide more reasonable equity between customer classes by considering the demand characteristics of each class.

3. Depreciable Lives. In this proceeding, North Mercer requests to adjust for ratemaking purposes the depreciable lives that are currently assigned to some of the asset groups shown in its plant ledger. Staff's review and findings of the depreciable lives used by North Mercer during the test year and the adjustments it proposes thereto are summarized in this report beginning on page 12 at Ref. Item (F). Any depreciable lives approved by the Commission in this proceeding for ratemaking purposes should also be used by North Mercer for all future accounting and reporting purposes. No adjustment to accumulated depreciation or retained earnings should be made to account for the effect of this change in accounting estimate.

#### Pro Forma Operating Statement

North Mercer's Pro Forma Operating Statement for the test year ended December 31, 2015, as determined by Staff, appears below.

	<u>Test Year</u>	<u>Adjustment</u>	<u>(Ref.)</u>	<u>Pro Forma</u>
Operating Revenues				
Sales of Water	\$ 1,971,576	\$ (8,998)	(A)	\$ 1,962,578
Miscellaneous Service Revenue	63,514			63,514
Total Operating Revenues	<u>2,035,090</u>	<u>(8,998)</u>		<u>2,026,092</u>
Operating Expenses				
Operation and Maintenance Expenses				
Salaries and Wages - Employees	428,981	(35,423)	(B)	393,558
Salaries and Wages - Commissioners	15,300			15,300
Employee Pensions and Benefits	150,138	1,382	(C)	151,520
		20,117	(D)	171,637
Purchased Water	629,216			629,216
Purchased Power	23,274			23,274
Materials and Supplies	67,190			67,190
Contractual Services	39,225			39,225
Water Testing	15,650			15,650
Transportation Expenses	28,455			28,455
Insurance	36,346			36,346
Bad Debt Expense	5,054			5,054
Miscellaneous Expense	34,340			34,340
Total Operation and Maintenance Expenses	1,473,169	(13,924)		1,459,245
Taxes Other Than Income	36,756	(2,710)	(E)	34,046
Amortization	2,815			2,815
Depreciation	455,478	(112,830)	(F)	342,648
Total Operating Expenses	<u>1,968,218</u>	<u>(129,464)</u>		<u>1,838,754</u>
Net Operating Income	66,872	120,466		187,338
Interest Income	10,078			10,078
Income Available to Service Debt	<u>\$ 76,950</u>	<u>\$ 120,466</u>		<u>\$ 197,416</u>

(A) Billing Analysis Adjustment. The utility's 2015 billing analysis of customer usage at current rates produces normalized revenues from water sales of \$1,962,578. Accordingly, Staff has decreased annual revenues from water sales by \$8,998, from \$1,971,576 to \$1,962,578.

(B) Salaries and Wages – Employees. During the test year, North Mercer reported \$428,981 for Salaries and Wages – Employees expense. In its Application,

North Mercer proposed to increase this amount by \$46,269 to account for an anticipated hiring of a new employee in 2017 and a 3 percent employee wage rate increase that was approved by its Board of Commissioners on December 16, 2015. Staff determined, based on conversations with utility personnel, that a decrease of \$35,423 to Salaries and Wages – Employees was warranted to reflect three items as described below.

When reviewing the minutes of North Mercer's Board of Commissioner's meetings, Staff found that wage increases granted to North Mercer's employees were not 3 percent across the board. Staff determined that raises ranged from 3 to 4.5 percent. All three of the administrative employees received a 3 percent raise, one field employee received a 3.5 percent raise, and the other four field employees received 4.5 percent raises. There was no discussion in the minutes of North Mercer's Board of Commissioner's meetings describing the variance in the percentages awarded to the office employees and the field employees. During discussions with North Mercer's general manager, Staff determined that the field employees received increased raises as compensation for obtaining additional certifications. Staff finds that the amount of the pay increases is known and measurable and may be included in the calculation of North Mercer's pro forma operations.

Additionally, Staff found that one employee who earned \$14.95 per hour during the test year was replaced with an employee who currently earns \$14.00 per hour. Staff accounted for this personnel change in pro forma operations.

Finally, included in North Mercer's Salaries and Wages – Employees adjustment was \$33,400 for an anticipated hiring in 2017, as referenced earlier, to fill a position that has been vacant since the test year. Staff finds that the amount of this increase is not



known and measurable and excluded it from the calculation of North Mercer's pro forma operations.

The calculation of the aforementioned changes is shown in the table below. Also note that the calculation excludes, for ratemaking purposes, two items that are included in North Mercer's test-year wage expense. First, North Mercer pays out annual bonuses to all of its employees. Staff asked North Mercer's general manager what the bonuses are based on, and she stated that they are based solely on the discretion of the commissioners. The amount of bonuses paid during the test year was \$18,838. Secondly, North Mercer's employees are allowed to be paid for remaining sick days that are unused at the end of the year. The amount paid out during the test year for unused sick days was \$8,459.

Employee No.	2016 Wages		2015 Hours		Pro Forma Wages
	Regular	Overtime	Regular	Overtime	
1 Salaried					\$ 91,287
2	\$21.75	32.63	1976		42,978
3	18.57	27.86	1976		36,694
4	23.47	35.21	2080	136.00	53,605
5	31.26	46.89	2080	107.50	70,061
6	15.20	22.80	2080	82.25	33,491
7	15.51	23.27	2080	95.50	34,483
8	14.00	21.00	2080	87.50	30,958
Pro Forma Wages					393,558
Less: Test Year Wages					(428,981)
Decrease					\$ (35,423)

(C) Employee Pensions and Benefits. North Mercer reported \$150,138 test-year Employee Pensions and Benefits expense. This amount included \$98,638 for the cost of providing health, dental, vision, life, and disability insurance benefits to all full-



time employees and partial benefits to the three members of North Mercer’s board of commissioners. Although North Mercer did not employ any part-time employees during the test year, pursuant to its employee policies, it does not offer benefits to part-time employees. All three of North Mercer’s commissioners receive life, vision, and disability insurance, while two of the three receive dental insurance.

In its Application, North Mercer proposed to increase the test-year pensions and benefits expense by \$16,194 as a “ratio of existing benefits to wages.”<sup>4</sup> North Mercer did not show the calculation of its proposed adjustment.

Staff finds that North Mercer’s test-year health, dental, vision, life, and disability insurance expense should be increased by \$1,390. As shown below, Staff calculated this amount by annualizing the most recent monthly premium paid on behalf of all full-time employees who were receiving benefits at the time of Staff’s review and subtracting the test-year expense from the annualized total.

Current Premiums for Full-time Employees	
Heathcare	\$ 7,773
Dental	288
Vision, Life, and Disability	<u>274</u>
Total: Monthly Premiums	8,335
Times: 12 Months	<u>12</u>
Annualized	100,020
Less: Test Year	<u>(98,638)</u>
Increase	<u>\$ 1,382</u>

Although North Mercer provides benefits to its board members, Staff did not include this cost in its adjustment. Recognizing that North Mercer’s policy is to deny

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<sup>4</sup> Application, ARF Form 1 – Attachment SAO-W

benefits to part-time employees, Staff omitted the cost of board members' benefits costs from North Mercer's pro forma operations in order to be consistent with the Commission's historic practice.

The Commission has consistently found that a member of a water district board of commissioners is considered to be a part-time employee.<sup>5</sup> Further finding that "[d]istinctions between board officials and other district employees is contrary to law," the Commission has, for ratemaking purposes, eliminated the cost of fringe benefits provided to a board member when the benefit is not also provided to other part-time employees.<sup>6</sup>

(D) Retirement Expense Pursuant to GASB 68. North Mercer provides pension benefits and post-retirement health care benefits to its employees by participating in the County Employee Retirement System ("CERS"). As a participating member, North Mercer is required to contribute a percentage of its employee wages to CERS. The table below summarizes the CERS contribution rates for each of the previous six fiscal years beginning July 1.

Fiscal Year Beginning July 1,	Employer Contribution Rate
2011	16.93%
2012	18.96%
2013	19.55%
2014	18.89%
2015	17.67%
2016	17.06%

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<sup>5</sup> Case No. 2003-00224, *Application of Northern Kentucky Water District for (A) an adjustment of Rates; (B) a Certificate of Public Convenience and Necessity for Improvements to Water Facilities if Necessary; and (C) Issuance of Bonds* (PSC Ky. June 14, 2004), Order at 11.

<sup>6</sup> *Id.*

During the test year, North Mercer contributed \$71,628 to CERS on behalf of its employees. Prior to the test year, North Mercer was required to report annual pension costs and post-retirement health care costs pursuant to Governmental Accounting Standards Board ("GASB") Statement No. 27 ("GASB 27"). GASB 27 required that North Mercer report its CERS contributions as employee retirement expense. GASB 27 did not require that North Mercer report a liability on its financial statements for a portion of either CERS's Net Pension Liability ("NPL") or CERS's underfunded post-retirement health care costs.

The accounting and reporting requirements for the CERS pension benefit changed during the test year due to the passage and implementation of GASB 68. The accounting for post-retirement health care costs did not change. Beginning in the test year, GASB 68 requires that North Mercer report the following for pensions:

- 1) a charge against Retained Earnings to account for the cumulative effect of switching from GASB 27 to GASB 68;
- 2) North Mercer's proportionate share of the CERS NPL;
- 3) Deferred Inflow of Resources and Deferred Outflow of Resources related to pensions; and
- 4) Annual pension expense that includes:
  - a. pension contributions to CERS during the reporting period that were made prior to the NPL's measurement date;
  - b. the amortization of North Mercer's proportionate share of Deferred Outflow of Resources and Deferred Inflow of Resources related to pensions;

c. North Mercer's proportionate share of the plan's actuarially determined annual pension expense; and

d. the increase or decrease that occurs during the reporting period to the amount of North Mercer's proportionate share of the CERS NPL.

To implement GASB 68 during the test year, North Mercer relied on the results of the CERS actuarial valuation for the fiscal year ended June 30, 2014. Using the 2014 valuation, North Mercer reported the following account balances to account for GASB 68 and its impact on North Mercer's test year beginning balance of Retained Earnings.<sup>7</sup>

NPL	\$ 550,383
Impact on Retained Earnings	(539,982)
Deferred Outflows	79,318
Deffered Inflows	48,800
Retirement Expense	31,800

In Case No. 2016-00163,<sup>8</sup> after considering the effects of GASB 68 on Marion County Water District's ("Marion District") test-year operations, the Commission found that, except for the NPL, the difference between the amounts reported for retirement costs pursuant to GASB 68 and those that would have been reported pursuant to GASB 27 should be accounted for as a regulatory asset as allowed by GASB 62. The Commission found that its method would mitigate the impact of GASB 68 on Marion District's Balance Sheet and that it would smooth the level of annual retirement expense reported by Marion District in future reporting periods because the annual expense

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<sup>7</sup> Note that North Mercer's implementation of GASB 68 resulted in its reporting test-year retirement expense in the amount of \$31,800, or \$20,117 less than the amount of its actual test-year contributions to CERS that were allocated to the CERS pension fund.

<sup>8</sup> Case No. 2016-00163, *Alternative Rate Adjustment Filing of Marion County Water District* (Ky. PSC Nov. 10, 2016).

would always be equal to the amount of Marion District’s contributions to CERS, which historically have been fairly constant.

Staff finds that the method of accounting for retirement costs applied by the Commission to Marion District will provide the same benefits to North Mercer and should, therefore, be applied in this proceeding. Application of the Commission’s method to North Mercer’s audited retirement costs requires the following journal entry.

	Dr.	Cr.
Regulatory Asset	\$ 550,383	
Deferred Inflows	48,800	
Retirement Expense	20,117	
Retained Earnings		\$ 539,982
Deferred Outflows		79,318

The above journal entry results in the Staff adjusted account balances shown below.

Regulatory Asset	\$ 550,383
NPL	550,383
Impact on Retained Earnings	
Deferred Outflows	
Deferred Inflows	
Retirement Expense	51,917

Accordingly, Staff increased North Mercer’s test-year retirement expense by \$20,117 to restate the expense to \$51,917, the amount of North Mercer’s test-year contribution to the CERS pension fund.

(E) Taxes Other Than Income. As discussed in Item (B), Staff determined that North Mercer’s test-year employee wages will decrease by \$35,423 due to changes made to North Mercer’s test-year employee staffing and wage rates. North Mercer’s

test-year FICA taxes will decrease as a result of these changes. As calculated below, Staff determined that the decrease to test-year FICA taxes will be \$2,710. Accordingly, Staff decreased test-year Taxes Other Than Income by \$ 2,710.

Decrease to Employee Wages Expense	\$ (35,423)
Times: 7.65% FICA Tax Rate	<u>7.65%</u>
FICA Tax Rate Decrease	<u>\$ (2,710)</u>

(F) Depreciation. North Mercer reported test-year depreciation expense in the amount of \$455,478. It calculated this amount using the whole-life, straight-line method, pursuant to which an asset’s depreciable basis is divided by its estimated useful life. In its Application, North Mercer requested to decrease the test-year amount by \$70,246. The calculation of North Mercer’s depreciation expense adjustment is part of the Application and is titled “Table A: Depreciation Expense Adjustments.”

Staff decreased North Mercer’s test-year depreciation expense by \$112,830 to account for:

- 1) an adjustment to the depreciable lives assigned to certain asset groups;
- 2) annualizing depreciation that accrued on assets that were placed into service during the test year.
- 3) post-test-year purchase of new office building, and
- 4) the removal of test-year depreciation expense reported on assets that had become fully depreciated during the test year.

Staff's total decrease to test-year depreciation expense is summarized below.

Adjustment to Account for Changes to Depreciable Lives	\$ (115,580)
Adjustment to Account for Office Building Purchase	<u>2,750</u>
Total Adjustment to Test-Year Depreciation Expense	<u>\$ (112,830)</u>

#### Change to Depreciable Lives

In its Application, North Mercer stated that it proposed to change the depreciable lives that were used to calculate test-year depreciation for certain assets following the Commission's "practice" of making adjustments to lives that "fall outside the ranges recommended by the National Association of Regulatory Utility Commissioners ('NARUC') in its publication titled Depreciation Practices for Small Utilities" ("NARUC Study").<sup>9</sup>

Generally, the Commission requires that a "large" utility perform a depreciation study to determine the appropriate depreciable lives to be assigned to each of its utility plant account groups. Detailed property records specific to historic plant additions, plant retirements, and salvage practices are required to complete a depreciation study. Generally, "small" water utilities, such as North Mercer, do not maintain property records with enough detail to properly complete a formal study. Even when adequate records are maintained, "small" utilities do not have the financial resources to fund a formal study. Therefore, to evaluate the reasonableness of the depreciation practices of small

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<sup>9</sup> Application, ARF Form 1, Attachment SAO-W, References.



water utilities, the Commission has historically relied upon the NARUC Study published in 1979.<sup>10</sup>

The NARUC Study provides a range of average service lives that are assigned to water plant account groups by water utilities across the country that design, install, and maintain their systems in accordance with good engineering practices. It concludes that the ranges are intended to be used as a guide by state regulatory commissions and other water utilities when developing the depreciable lives to be assigned to water plant account groups. For example, the NARUC Study found that transmission and distribution mains are depreciated between 50 and 75 years. Lives outside the NARUC ranges are acceptable when conditions warrant alternative lives.

When evaluating a water district's depreciable lives, the Commission considers an asset group's construction materials, condition, and other factors to determine an appropriate depreciable life that falls either inside or outside of the NARUC ranges. The Commission has assigned lives at the short end and long end of the NARUC ranges when evidence is presented to support such lives. For example, in Case No. 2012-00309,<sup>11</sup> the Commission found that Southern Water and Sewer District's mains should be depreciated using a 50-year life, the shortest life within the NARUC range, because the majority of its mains had decayed at a more rapid rate than originally anticipated. It stated that this deterioration is evident by its excessive water loss,<sup>12</sup> which was 44.35

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<sup>10</sup> Case No. 2012-00278, *Application of Graves County Water District for an Adjustment in Rates Pursuant to the Alternative Rate Filing Procedure for Small Utilities* (Ky. PSC Sept. 5, 2012).

<sup>11</sup> Case No. 2012-00309, *Application of Southern Water and Sewer District for an Adjustment in Rates Pursuant to the Alternative Rate Filing Procedure for Small Utilities* (Ky. PSC July 12, 2013).

<sup>12</sup> *Id.*, Application, Attachment C, at 19–20.

percent.<sup>13</sup> In Case No. 2012-00413, the Commission accepted Staff's finding that the depreciable life assigned to Pendleton County Water District's mains should be 75 years because they were thought to be free of noticeable decay and in excellent condition.<sup>14</sup>

When no evidence exists to support a specific life that is inside or outside the NARUC ranges, the Commission has used the mid-point of the NARUC ranges to depreciate utility plant. In Case No. 2013-00154, the Commission found that Henderson County Water District ("Henderson District") was depreciating the cost of some main using a 40-year life and others using a 50-year life. Even though the 50-year life is within the NARUC range, the Commission found that the depreciable life assigned to all of Henderson District's mains should be 62.5 years, the mid-point of the NARUC range, since no evidence was presented to support the 40-year or 50-year lives.<sup>15</sup>

Transmission and Distribution Mains. In this proceeding, Staff discussed with North Mercer's general manager the overall condition of North Mercer's utility plant in service. During those discussions, the general manager stated that North Mercer has experienced an increased failure rate in an estimated 125 miles of the district's more than 400 miles of mains. North Mercer speculates that the increased failure rate is a result of the poor quality of the pipes that were installed. Based on its discussions with the general manager, and a water loss percentage that is relatively low, Staff finds that

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<sup>13</sup> *Id.* at 13.

<sup>14</sup> Case No. 2012-00413, Commission Staff Report on Pendleton County Water District (filed Oct. 29, 2012) at 10.

<sup>15</sup> Case No. 2013-00154, *Application of Henderson County Water District for an Alternative Rate Filing* (Ky. PSC Nov. 14, 2013) at Appendix B.

North Mercer’s Transmission and Distribution Mains should be depreciated using the mid-point of the NARUC ranges. Accordingly, Staff adjusted the lives assigned to all mains to 62.5 years.

Staff accepted North Mercer’s adjustments to other assets to bring them within NARUC recommended ranges. Staff’s calculation of North Mercer’s decrease to depreciation expense is shown in Attachment B to this report.

Purchase of New Office Building. Subsequent to the test year, in Case No. 2016-00392,<sup>16</sup> North Mercer sought and received Commission approval to purchase and renovate an office building which included a 0.24 acre tract of land. In its December 22, 2016 Order, the Commission authorized the purchase and renovation of the property. The purchase price and renovation costs were estimated to be \$100,000 and \$10,000, respectively.<sup>17</sup>

The purchase of the office building and tract of land was completed on December 28, 2016. As calculated below, Staff included the purchase and renovation costs in pro forma depreciation expense.

	Original Cost	Divide by: Depreciable Life	Pro Forma Depreciation Expense
Office Building Purchase and Renovation Structures and Improvements	\$ 110,000	40	\$ 2,750
Adjustment			<u>\$ 2,750</u>

<sup>16</sup> Case No. 2016-00392, *Application of North Mercer Water District for a Certificate of Public Convenience and Necessity to Acquire a Building and Make Minimal Adaptations Thereto.* (Ky. PSC Dec. 22, 2016).

<sup>17</sup> *Id* at 2.

Fully Depreciated Assets. Included in North Mercer's Depreciation Expense Adjustments were some assets that were fully depreciated prior to or by the end of the test year. As a result, depreciation expense will not accrue on these assets in future reporting periods. Accordingly, Staff removed their expense from the calculation of North Mercer's test-year depreciation expense.

#### Overall Revenue Requirement and Required Revenue Increase

The Commission has historically applied a DSC method to calculate the Overall Revenue Requirement of water districts and water associations. This method allows for recovery of: 1) cash related pro forma operating expenses; 2) recovery of depreciation expense, a non-cash item, to provide working capital;<sup>18</sup> 3) the average annual principal and interest payments on all long-term debts; and 4) working capital that is in addition to depreciation expense.

A comparison of North Mercer's and Staff's calculations of North Mercer's Overall Revenue Requirement and Required Revenue Increase using the DSC method is shown below.

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<sup>18</sup> The Kentucky Supreme Court has held that the Commission must permit a water district to recover its depreciation expense through its rates for service to provide internal funds for renewing and replacing assets. See *Public Serv. Comm'n of Kentucky v. Dewitt Water Dist.*, 720 S.W.2d 725, 728 (Ky.1986). Although a water district's lenders require that a small portion of the depreciation funds be deposited annually into a debt reserve/depreciation fund until the account's balance accumulates to a required threshold, neither the Commission nor the Court requires that revenues collected for depreciation be accounted for separately from the water district's general funds or that depreciation funds be used only for asset renewal and replacement. The Commission has recognized that the working capital provided through recovery of depreciation expense may be used for purposes other than renewal and replacement of assets. See Case No. 2012-00309, *Application of Southern Water and Sewer District for an Adjustment in Rates Pursuant to the Alternative Rate Filing Procedure for Small Utilities* (Ky. PSC Dec. 21, 2012).

	North Mercer	Staff	(Ref)
Pro Forma Operating Expenses	\$1,963,975	\$ 1,838,754	
Plus: Average Annual Principal and Interest Payments	472,088	444,567	(1)
Additional Working Capital	90,419	88,913	(2)
Overall Revenue Requirement	2,526,482	2,372,234	
Less: Other Operating Revenue	(63,514)	(63,514)	
Interest Income	(10,078)	(10,078)	
Revenue Required From Rates	2,452,890	2,298,642	
Less: Pro Forma Present Rate Revenue	(1,971,576)	(1,962,578)	
Required Revenue Increase	<u>\$ 481,314</u>	<u>\$ 336,064</u>	
Percent Increase	<u>24.41%</u>	<u>17.12%</u>	

(1) Average Annual Principal and Interest Payments. At the time of filing, North Mercer had six outstanding bond series payable to the United States Department of Agriculture Rural Development ("RD") and one loan payable to the Kentucky Infrastructure Authority ("KIA"). In its Application, North Mercer requested recovery of the five-year average annual principal and interest payments due in 2016, 2017, 2018, 2019, and 2020 in the amount of \$472,088.

Subsequent to the test year, in Case No. 2016-00355,<sup>19</sup> North Mercer sought and received the Commission's authority to borrow up to \$2,079,000<sup>20</sup> from KIA in order to refinance RD Bond Series 91-06, 91-08, and 91-09. In its November 15, 2016 Order,

<sup>19</sup> Case No. 2016-00355, *Application of North Mercer Water District to Issue Securities in the Approximate Principal Amount of \$1,890,000 for the Purpose of Refunding Certain Outstanding Revenue Bonds of the District Pursuant to the Provisions of KRS 278.300 and 807 KAR 5:001* (Ky. PSC Nov. 15, 2016).

<sup>20</sup> In its Order, the Commission identified the RD bonds as Waterworks Revenue Bonds Series 1994, 1996, and 2003, respectively. The Commission authorized North Mercer to borrow up to \$2,079,000. This amount included \$1,890,000 for the estimated amount of bond proceeds necessary to complete the refinancing, plus an adjustment of up to 10 percent of the estimated amount, or \$189,000.

the Commission authorized the refinancing, finding that it would produce estimated gross savings and net present value savings in the amounts of \$354,052 and \$259,302 respectively.<sup>21</sup> Recognizing that the estimated savings were based on interest rates that fluctuate with bond market conditions that may change before the refinancing transaction was complete, the Commission ordered that the transaction be consummated only if the actual interest rates would result in gross savings and present value savings. To ensure savings were realized, the Commission ordered that North Mercer file amortization schedules and work papers showing the actual savings if they were different from the estimated savings.

The KIA refinancing transaction was completed on November 30, 2016 (“KRWFC Series 2016D”). On January 30, 2017, North Mercer submitted amortization schedules and work papers to the Commission showing the actual gross savings and present value savings that would result from the refinancing.<sup>22</sup> The schedules and work papers demonstrated that the gross savings and present value savings that ultimately resulted from the refinancing of the three bond series was \$145,208 and \$103,047, respectively.

After accounting for the refinancing that resulted from Case No. 2016-00355, North Mercer’s five-year average debt payment calculated by Staff, beginning with principal and interest payments due in 2017, is \$444,567, or \$27,521 less than the amount requested by North Mercer. The five-year average allows North Mercer recovery of the debt payments that will be made during the anticipated life of the rates

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<sup>21</sup> *Id.* at 2.

<sup>22</sup> North Mercer’s January 30, 2016 filing can be found in the “post case file” for Case No. 2016-00355 at [http://psc.ky.gov/PSC\\_WebNet/ViewCaseFilings.aspx?case=2016-00355](http://psc.ky.gov/PSC_WebNet/ViewCaseFilings.aspx?case=2016-00355).

authorized by the Commission in this proceeding.<sup>23</sup> Staff's calculations are shown below.

Five-Year Average of Debt Payments	
Year	Annual Debt Payment
2017	\$ 441,539
2018	481,055
2019	436,213
2020	430,013
2021	434,013
Five-Year Total	2,222,834
Divide by: 5 years	5
Average Annual Principal and Interest Payment	<u>\$ 444,567</u>

(2) Additional Working Capital. The DSC method, as historically applied by the Commission, includes an allowance for additional working capital that is equal to the minimum net revenues required by a district's lenders that are above its average annual debt payments. In addition to depreciation expense, North Mercer requested recovery of an allowance for working capital that is equal to 120 percent of its average annual debt payments.

North Mercer's lenders require North Mercer to charge rates that produce net revenues that are at least 120 percent of its average annual debt payments. Following the Commission's historic practice, Staff calculated North Mercer's allowance for additional working capital, based on a DSC ratio of 1.20, to be \$88,913, as shown

<sup>23</sup> Generally, the anticipated life of a utility's service rates is based on the frequency of the utility's previous rate case filings, but no longer than five years, since rates tend to become obsolete due to changes that will likely occur to the utility's cost of service in a five-year period.



below.<sup>24</sup> Staff included this amount in the calculation of North Mercer's Overall Revenue Requirement.

Average Annual Principal and Interest	\$ 444,567
Times: DSC Coverage Ratio	<u>120%</u>
Total Net Revenues Required	533,480
Less: Average Annual Principal and Interest Payments	<u>(444,567)</u>
Additional Working Capital	<u>\$ 88,913</u>

<sup>24</sup> Inclusion of the additional working capital in North Mercer's revenue requirement is not necessary for it to earn revenues that meet the minimum DSC ratio required by its lenders. As depreciation is a noncash item, it is excluded from the ratio calculation, which is actually a measure of cash flow. As shown below, North Mercer's minimum DSC ratio is met with or without the inclusion of additional working capital.

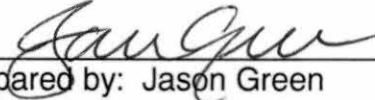
	With Additional Working Capital	Without Additional Working Capital
Overall Revenue Requirement	\$ 2,372,242	\$ 2,283,329
Less: Operating and Maintenance Expense	(1,459,253)	(1,459,253)
Taxes Other Than Income	<u>(34,046)</u>	<u>(34,046)</u>
Net Revenues	878,943	790,029
Divided by: Average Annual Debt Payments	<u>444,567</u>	<u>444,567</u>
DSC Ratio	<u>198%</u>	<u>178%</u>

Signatures



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Prepared by: David P. Foster  
Water and Sewer Revenue  
Requirements Branch  
Division of Financial Analysis



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

ATTACHMENT A

ATTACHMENT TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE  
COMMISSION IN CASE NO. 2016-00325 DATED **MAR 22 2017**

Monthly Water Rates

5/8-Inch Meters

First	1,000 gallons	\$ 18.63	Minimum Bill
Over	10,000 gallons	7.75	per 1,000 gallons

1-Inch Meters

First	2,500 gallons	\$ 30.26	Minimum Bill
Over	2,500 gallons	7.75	per 1,000 gallons

2-Inch Meters

First	10,000 gallons	\$ 88.38	Minimum Bill
Over	10,000 gallons	7.75	per 1,000 gallons

ATTACHMENT B

ATTACHMENT TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE  
COMMISSION IN CASE NO. 2016-00325 DATED **MAR 22 2017**

Reservoir and Standpipes								
Description shown in Ledger	In Service Date	Original Cost	Current		Proposed by Staff		Difference	
			Life	Depreciation	Life	Depreciation		
Reservoir/Standpipe	7/1/1983	\$ 209,720	40	\$ 5,243	50	\$ 4,194	\$ (1,049)	
Reservoir/Standpipe	7/1/1989	207,184	40	5,180	50	4,144	(1,036)	
Tank	1/15/1990	9,509	40	238	50	190	(48)	
Tank	10/20/1993	62,214	40	1,555	50	1,244	(311)	
Standpipe Loicru Valve	10/29/2004	846	40	21	50	17	(4)	
Danville Rd Tank Project	1/8/2007	543,821	40	13,596	50	10,876	(2,719)	
Culberts Creek Tank Project	8/31/2007	598,237	40	14,956	50	11,965	(2,991)	
Miscellaneous	7/31/2008	21,660	40	542	50	433	(108)	
Dixville Rd Tank Project	6/1/2010	28,581	40	715	45	635	(79)	
Total Adjustment for Reservoir's and Standpipes								(8,345)

Hydrants								
Description shown in Ledger	In Service Date	Original Cost	Current		Proposed by Staff		Difference	
			Life	Depreciation	Life	Depreciation		
Hydrants	7/7/1983	14,170	40	354	50	283	(71)	
Hydrants	7/1/1992	1,120	40	28	50	22	(6)	
Hydrants	12/31/1993	800	40	20	50	16	(4)	
2 Hydrants	11/29/1999	1,531	40	38	50	31	(8)	
Hydrants	7/1/2000	1,967	40	49	50	39	(10)	
Hydrants - Perryville Rd	4/9/2001	700	40	18	50	14	(4)	
Hydrants	1/31/2008	1,300	40	33	50	26	(7)	
Total Adjustment for Hydrants								(108)

Meters and Meter Installs								
Description shown in Ledger	In Service Date	Original Cost	Current		Proposed by Staff		Difference	
			Life	Depreciation	Life	Depreciation		
28 Installations	7/1/2010	12,579	20	629	40	314	(314)	
37 Installations	7/1/2011	19,070	20	953	40	477	(477)	
22 Installations	7/1/2013	12,866	20	643	40	322	(322)	
Meter Setter	12/19/2012	685	20	34	40	17	(17)	
Total Adjustment for Meters and Meter Installs								(1,130)

Office Furniture and Equipment								
Description shown in Ledger	In Service Date	Original Cost	Current		Proposed by Staff		Difference	
			Life	Depreciation	Life	Depreciation		
Dell Computer/Monitor	1/31/2013	3,475	5	695	10	348	(348)	
Whirlpool Refrigerator	6/12/2014	748	7	107	20	37	(69)	
Computer Server and System	8/31/2015	4,996	5	999	10	500	(500)	
Total Adjustment for Office Furniture and Equipment								(917)

Other Plant and Miscellaneous Equipment (Continued)

Description shown in Ledger	In Service Date	Original Cost	Current		Proposed by Staff		Difference
			Life	Depreciation	Life	Depreciation	
Telemetry	7/1/1999	109,148	40	2,729	10	10,915	8,186
Telemetry	7/1/1999	20,563	40	514	10	2,056	1,542
Test	12/29/2000	6,346	40	159	10	635	476
Total Adjustment for Other Plant and Miscellaneous Equipment							10,204

Structures and Improvements

Description shown in Ledger	In Service Date	Original Cost	Current		Proposed by Staff		Difference
			Life	Depreciation	Life	Depreciation	
Fencing/Curbs/Windows/New Door	4/30/2013	22,205	20	1,110	35	634	(476)
Total Adjustment for Structures and Improvements							(476)

Transmission and Distribution Mains

Description shown in Ledger	In Service Date	Original Cost	Current		Proposed by Staff		Difference
			Life	Depreciation	Life	Depreciation	
Distribution	7/1/1983	829,057	40	20,726	63	13,265	(7,462)
Transmission/Distribution	7/1/1984	184,957	40	4,624	63	2,959	(1,665)
Transmission/Distribution	1/1/1985	16,973	40	424	63	272	(153)
Transmission/Distribution	7/1/1986	27,466	40	687	63	439	(247)
Transmission/Distribution	7/1/1988	8,619	40	215	63	138	(78)
Transmission/Distribution	7/1/1989	889,042	40	22,226	63	14,225	(8,001)
Transmission/Distribution	7/1/1991	14,235	40	356	63	228	(128)
Transmission/Distribution	7/1/1993	6,496	40	162	63	104	(58)
Transmission/Distribution	12/31/1993	1,382,652	40	34,566	63	22,122	(12,444)
Transmission/Distribution	12/1/1995	1,139,834	40	28,496	63	18,237	(10,259)
Fontaine View Addition	7/1/1995	19,950	40	499	63	319	(180)
Salvisa/Hughes Addition	12/31/1996	6,664	40	167	63	107	(60)
Tapping Valve & Sleeve	6/1/1997	850	40	21	63	14	(8)
Drill Tugs	6/1/1997	150	40	4	63	2	(1)
KU Waterline Replacement	6/1/1997	5,338	40	133	63	85	(48)
Phase V	6/1/1997	508,361	40	12,709	63	8,134	(4,575)
Phase IV	6/1/1997	7,838	40	196	63	125	(71)
Hagan Lane	6/1/1998	17,620	40	441	63	282	(159)
Wendys	6/1/1998	5,279	40	132	63	84	(48)
Jett Harrod	6/1/1999	8,303	40	208	63	133	(75)
Manin Isham	6/1/1999	800	40	20	63	13	(7)
Horn Mt Pleas	6/1/1999	850	40	21	63	14	(8)
Cole Lane Shell	6/1/1999	850	40	21	63	14	(8)
Simpson BC	6/1/1999	800	40	20	63	13	(7)
Phase VI	6/1/1999	16,562	40	414	63	265	(149)
Moeller	6/1/1999	800	40	20	63	13	(7)
Additions	6/1/2000	53,175	40	1,329	63	851	(479)
S W	6/1/2001	4,589	40	115	63	73	(41)
Lutlett Lane	6/1/2001	28,854	40	721	63	462	(260)
Bugg Road	6/1/2001	11,415	40	285	63	183	(103)
Uslan Kirkwood	6/1/2001	3,412	40	85	63	55	(31)
Bradford Lane Kolbe	9/6/2002	10,000	40	250	63	160	(90)
Tewancy Road Loop	6/1/2002	108,689	40	2,717	63	1,739	(978)
Catlett Lane	6/1/2002	1,873	40	47	63	30	(17)
Bugg Road	6/1/2002	8,801	40	220	63	141	(79)
Fayette Lane	6/1/2002	294	40	7	63	5	(3)
Whitenack Lane	6/1/2002	27,715	40	693	63	443	(249)
Bruce & Elliot	6/1/2002	73,027	40	1,826	63	1,168	(657)

Transmission and Distribution Mains (Continued)

Leaterroull	6/1/2002	9,984	40	250	63	160	(90)
Patterson Lane	6/1/2002	606	40	15	63	10	(5)
Kays Rd/Lloyd	6/1/2002	1,552	40	39	63	25	(14)
Oregon Road	6/1/2002	94,457	40	2,361	63	1,511	(850)
Miller B Dean Wildcut	6/1/2002	2,200	40	55	63	35	(20)
Warwick Phillips	6/1/2003	1,556	40	39	63	25	(14)
Bradford Lane	6/1/2003	5,861	40	147	63	94	(53)
D Mills Lville	6/1/2003	650	40	16	63	10	(6)
H Logue Perryvile Rd E	6/1/2003	2,039	40	51	63	33	(18)
Crepenne North	6/1/2003	27,605	40	690	63	442	(248)
Crepenne South	6/1/2003	37,697	40	942	63	603	(339)
Cup Rd Horn	6/1/2003	42,414	40	1,060	63	679	(382)
Carl Lay Lane	6/1/2003	12,183	40	305	63	195	(110)
Lester Road	6/1/2003	60	40	1	63	1	(1)
Ben Lester	6/1/2003	10,491	40	262	63	168	(94)
Fountain View	6/1/2003	318	40	8	63	5	(3)
Cole Lane	6/1/2003	10,032	40	251	63	161	(90)
River Crossing Providence	6/1/2003	18,840	40	471	63	301	(170)
US 68 Lake Village	6/1/2003	20,013	40	500	63	320	(180)
Phase VI	6/1/2004	1,515,652	40	37,891	63	24,250	(13,641)
Vanarsdell	6/1/2004	4,645	40	116	63	74	(42)
Phill Williams	6/1/2005	30,114	40	753	63	482	(271)
Fairview Road	6/1/2005	34,369	40	859	63	550	(309)
Bushtown	6/1/2005	26,935	40	673	63	431	(242)
Old Brown Road	6/1/2005	14,989	40	375	63	240	(135)
Mackville Road	6/1/2005	48,813	40	1,220	63	781	(439)
J. Gumiott	6/1/2005	14,278	40	357	63	228	(129)
Robb Nel	6/1/2005	12,021	40	301	63	192	(108)
Clay Lane Estate	6/1/2005	3,652	40	91	63	58	(33)
Alex Hts Gate #2	6/1/2005	639	40	16	63	10	(6)
Russell Bruce	6/1/2005	1,334	40	33	63	21	(12)
Vanarsdell Road	6/1/2006	785	40	20	63	13	(7)
Woods Pointe	6/1/2006	1,121	40	28	63	18	(10)
Volts Sawyer	6/1/2006	2,995	40	75	63	48	(27)
Jackson Pike	6/1/2006	5,445	40	136	63	87	(49)
Deep Concrete Manhole Hatch	10/31/2006	2,018	40	50	63	32	(18)
2" Bernard Model Pressure	10/31/2006	655	40	16	63	10	(6)
Lever & Valve	12/1/2006	865	40	22	63	14	(8)
Waterline Edgewood	1/31/2007	2,353	40	59	63	38	(21)
Hammond Glen	6/1/2007	342	40	9	63	5	(3)
Wathen County	6/1/2008	151,521	40	3,788	63	2,424	(1,364)
Kirkwood Bridge Main	6/1/2008	21,364	40	534	63	342	(192)
Stratton Rd Extension	6/1/2008	2,641	40	66	63	42	(24)
Tapping Valve	1/31/2008	520	40	13	63	8	(5)
Single Acting Altitude Valve	1/31/2008	3,225	40	81	63	52	(29)
RP Back Flow Prevention	6/30/2008	735	40	18	63	12	(7)
Washington County	1/1/2009	50,284	40	1,257	63	805	(453)
Mackville Road	6/1/2010	552,477	40	13,812	63	8,840	(4,972)
Providence Rd Line Rep	6/1/2010	108,482	40	2,712	63	1,736	(976)
Stratton Rd Extension	6/1/2010	1,037	40	26	63	17	(9)
Clay Lick Church Rd	6/1/2010	984	40	25	63	16	(9)
Z Plant	1/1/2011	2,589,813	40	64,745	63	41,437	(23,308)
Central Pike Bridge Line Rd	6/28/2012	2,738	40	68	63	44	(25)
20/20 Plant	10/1/2012	609,739	40	15,243	63	9,756	(5,488)
20/20 Project Phase III	11/30/2013	277,170	40	6,929	63	4,435	(2,495)
US 127 Water Main Reconnects	10/30/2014	197,554	40	4,939	63	3,161	(1,778)
US 127 Connect Final Bill	4/15/2015	1,000	40	25	63	16	(9)

Total Adjustment for Transmission and Distribution Mains

(108,234)

Transportation Equipment (Continued)

Description shown in Ledger	In Service Date	Original Cost	Current		Proposed by Staff		Difference
			Life	Depreciation	Life	Depreciation	
2013 Silver Toyota Tacoma	1/15/2013	19,030	5	3,806	7	2,719	(1,087)
2013 White Toyota Tacoma	1/15/2013	19,030	5	3,806	7	2,719	(1,087)
2013 Black Toyota Tacoma	1/15/2013	19,030	5	3,806	7	2,719	(1,087)
2012 Chevrolet Traverse	6/19/2015	20,000	5	4,000	7	2,857	(1,143)
2016 F250 4x4	9/23/2015	30,366	5	6,073	7	4,338	(1,735)
Dovetail Trailer	7/31/2015	7,600	5	1,520	7	1,086	(434)
Total Adjustment for Transportation Equipment							(6,575)
Total Adjustment for Change to Depreciable Lives							\$ (115,580)



ATTACHMENT C

ATTACHMENT TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE  
COMMISSION IN CASE NO. 2016-00325 DATED **MAR 22 2017**

**NORTH MERCER WATER DISTRICT**  
**ALLOCATION OF PLANT VALUE**

	TOTAL	COMMODITY	DEMAND	CUSTOMER
Structures & Improvements	\$206,041		\$206,041	
Land & Land Rights	48,802		48,802	
Pumping Equipment	48,996		48,996	
Distribution Reservoirs & Standpipes	1,695,007		1,695,007	
Transmission & Distribution Mains	12,644,980		12,644,980	
Hydrants	21,588			\$21,588
Meters & Meter Installations	2,258,692			2,258,692
<b>SUBTOTAL</b>	<b>\$16,924,106</b>	<b>\$0</b>	<b>\$14,643,826</b>	<b>\$2,280,280</b>
<b>PERCENT</b>	<b>100.00%</b>	<b>0</b>	<b>86.53%</b>	<b>13.47%</b>
General Plant (1)				
Transportation Equipment	211,742		183,213	28,529
Office Furniture & Equipment	36,550		31,625	4,925
Power Operated Equipment	63,809		55,212	8,597
Miscellaneous	2,866		2,480	386
Tools, Shop & Garage Equipment	7,032		6,085	947
Other Plant & Misc. Equipment	648,245		560,903	87,342
Total General Plant	970,244		839,518	130,726
<b>TOTAL VALUE</b>	<b>\$17,894,350</b>	<b>\$0</b>	<b>\$15,483,344</b>	<b>\$2,411,006</b>

(1) General Plant allocated based on overall weighted allocation of all other plant.

Note: Figures used were derived from 2015 Annual Report

## NORTH MERCER WATER DISTRICT ALLOCATION OF DEPRECIATION EXPENSE

	TOTAL	COMMODITY	DEMAND	CUSTOMER
Structures & Improvements	\$139,063		\$139,063	
Pumping Equipment	32,297		32,297	
Distribution Reservoirs & Standpipes	612,478		612,478	
Transmission & Distribution Mains	4,892,739		4,892,739	
Hydrants	14,496			\$14,496
Meters & Meter Installations	861,149			861,149
<b>SUBTOTAL</b>	<b>\$6,552,222</b>	<b>\$0</b>	<b>\$5,676,577</b>	<b>\$875,645</b>
<b>PERCENT</b>	<b>100.00%</b>	<b>0</b>	<b>86.64%</b>	<b>13.36%</b>
General Plant (1)				
Transportation Equipment	135,093		117,039	18,054
Office Furniture & Equipment	29,858		25,868	3,990
Power Operated Equipment	63,809		55,282	8,527
Miscellaneous	1,829		1,585	244
Tools, Shop & Garage Equipment	7,031		6,091	940
Other Plant & Misc. Equipment	410,995		356,069	54,926
Total General Plant	648,615		561,933	86,682
<b>TOTAL VALUE</b>	<b>\$7,200,837</b>	<b>\$0</b>	<b>\$6,238,510</b>	<b>\$962,327</b>

Note: Figures used were derived from 2015 Annual Report

# NORTH MERCER WATER DISTRICT

## ALLOCATION OF OPERATION AND MAINTENANCE EXPENSE

	TOTAL	COMMODITY	DEMAND	CUSTOMER
Employees Salaries	\$393,558		\$222,599	\$170,959
Employee Pensions & Benefits	171,637		97,079	74,558
Purchased Water	629,216	\$629,216		
Purchased Power	23,274	23,274		
Materials & Supplies	67,190		67,190	
Contractual Services - Maintenance	21,173		21,173	
<b>SUBTOTAL</b>	<b>\$1,306,048</b>	<b>\$652,490</b>	<b>\$408,041</b>	<b>\$245,517</b>
<b>LESS COMMODITY</b>	<b>-\$652,490</b>			
<b>SUBTOTAL</b>	<b>\$653,558</b>		<b>\$408,041</b>	<b>\$245,517</b>
<b>PERCENT</b>	<b>100.00%</b>		<b>62.43%</b>	<b>37.57%</b>
Water Testing	15,650		9,771	5,879
Transportation Expense	28,455		17,766	10,689
Commissioner Salaries	15,300		9,552	5,748
Insurance	36,346		22,692	13,654
Bad Debt Expense	5,054		3,155	1,899
Miscellaneous Expense	34,340		21,440	12,900
Amortization Expense	2,815		1,758	1,057
Contractual Services - Misc.	18,052		11,271	6,781
Taxes	34,046		21,256	12,790
<b>TOTAL</b>	<b>\$1,496,106</b>	<b>\$652,490</b>	<b>\$526,701</b>	<b>\$316,915</b>

# NORTH MERCER WATER DISTRICT

## SUMMARY OF ALLOCATIONS

	TOTAL	COMMODITY	DEMAND	CUSTOMER
Plant Percentages	100.00%		86.53%	13.47%
Available For Debt Service	\$533,480.00		\$461,601.24	\$71,878.76
Depreciation Percentages	100.00%		86.64%	13.36%
Total Depreciation	342,648.00		296,856.20	45,791.80
Total Operation & Maintenance	1,496,106.00	\$652,490.00	526,701.43	316,914.57
<b>REVENUE REQUIREMENT</b>	<b>\$2,372,234.00</b>			
<i>Less: Other Operating Revenue</i>	<i>-63,514.00</i>			<i>-63,514.00</i>
<i>Less: Interest Income</i>	<i>-10,078.00</i>			<i>-10,078.00</i>
<b>REVENUE REQUIRED FROM RATES</b>	<b>\$2,298,642.00</b>	<b>\$652,490.00</b>	<b>\$1,285,158.87</b>	<b>\$360,993.13</b>

## NORTH MERCER WATER DISTRICT CALCULATION OF WATER RATES

	TOTAL	FIRST 1,000	OVER 1,000
FROM BILLING ANALYSIS:			
COMMODITY PERCENTS	100.00%	20.38%	79.62%
<b>ACTUAL COMMODITY SALES</b>	221,799,670	45,208,000	176,591,670
PEAK DEMAND WEIGHTED FACTOR		2	1
PEAK DEMAND WEIGHTED SALES	267,007,670	90,416,000	176,591,670
<b>DEMAND PERCENTS</b>	100.00%	33.86%	66.14%
COMMODITY COSTS	\$652,490.00	\$132,992.84	\$519,497.16
DEMAND COSTS	\$1,285,158.87	\$435,189.46	\$849,969.41
CUSTOMER COSTS	\$360,993.13	\$360,993.13	
<b>TOTAL COSTS</b>	<b>\$2,298,642.00</b>	<b>\$929,175.43</b>	<b>\$1,369,466.57</b>
DIVIDE BY BILLS/GALLONS		49,876	176,591,670
<b>CALCULATED RATES</b>		<b>\$18.63</b>	<b>\$7.75</b>
		<b>FIRST 1,000</b>	<b>OVER 1,000</b>

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