COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF WEST MCCRACKEN COUNTY WATER DISTRICT FOR AN ALTERNATIVE RATE ADJUSTMENT	)))	CASE NO. 2017-00319

NOTICE OF FILING OF STAFF REPORT

Notice is hereby given that, in accordance with the Commission's Order of August 11, 2017, 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 August 11, 2017, Order, West McCracken County Water District is required to file written comments regarding the findings of Staff no later than 14 days from the filing of this Staff Report.

Gwen R. Pinson

Gwen R. Pinson
Executive Director
Public Service Commission
P.O. Box 615
Frankfort, KY 40602

DATED OCT 3 0 2017

cc: Parties of Record

STAFF REPORT

ON

WEST MCCRACKEN COUNTY WATER DISTRICT

CASE NO. 2017-00319

West McCracken County Water District ("West McCracken"), a water district organized pursuant to KRS Chapter 74, provides water service to approximately 1,517 residential, commercial, and industrial customers residing in McCracken County, Kentucky.[1] On August 1, 2017, West McCracken submitted its application ("Application") to the Commission requesting to adjust its water rates pursuant to 807 KAR 5:076. To ensure the orderly review of the Application, the Commission established a procedural schedule by Order dated August 11, 2017.

To comply with the requirements of 807 KAR 5:076, Section 9,[2] West McCracken based its requested rates on a historic test period that coincides with the reporting period shown in its most recent Annual Report on file with the Commission, the calendar year ended December 31, 2016. Using its pro forma test-year operations, West McCracken determined that it could justify a revenue increase of $219,791, or 34.66 percent;[3] however, West McCracken limited its request to a 10.00 percent increase, or $60,104 in additional revenues above its normalized revenues from rates of $602,232.[4] The rates requested by West

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[1] *Annual Report of West McCracken Heights Water District to the Public Service Commission for the Calendar Year Ended December 31, 2016* ("2016 Annual Report") at 12 and 48.

[2] The reasonableness of the proposed rates shall be determined using a twelve (12) month historical test period, adjusted for known and measureable changes, that coincides with the reporting period of the applicant's annual report for the immediate past year.

[3] Application, Revenue Requirement Calculation-Debt Service Coverage Method.

[4] *Id.*, Revenue from Current and Proposed Rates, Test Period from 01-01-16 to 12-31-16.

McCracken would increase the monthly bill of a typical residential customer using 3,000 gallons per month by $2.41, from $24.14 to $26.55, or approximately 10.00 percent.

On October 1, 2017, the Paducah Waterworks ("Paducah") increased its wholesale water rate to $2.10. The Commission, pursuant to 807 KAR 5:068, authorized West McCracken to increase its water rates in order to pass through the wholesale water rate increase ("PWA") of Paducah.[5] Adjusting West McCracken's requested rates by the PWA pass through results in a revised request of $91,065 or 15.11 percent in additional revenues above its normalized revenues from rates of $602,232. The rates requested by West McCracken adjusted for the PWA pass through would increase the monthly bill of a typical residential customer using 3,000 gallons per month by $3.60, from $24.14 to $27.14, or approximately 14.91 percent.

Summarized below are West McCracken's Pro Forma Income Statement and Revenue Requirement Determination – Debt Service Coverage Method:

Pro Forma Income Statement

	2016 Annual Report	Pro Forma Adjustments	Pro Forma Operations
Operating Revenues:			
Revenues from Water Sales:	$ 634,045	$ -	$ 634,045
Other Water Revenues:	26,931	0	26,931
Total Operating Revenues	660,976	0	660,976
Operating Expenses:			
Operation & Maintenance:	622,348	(17,000)	605,348
Depreciation	200,611	(53,206)	147,405
Taxes Other Than Income	10,166	0	10,166
Utility Operating Expenses	833,125	(70,206)	762,919
Net Utility Operating Income	$ (172,149)	$ 70,206	$ (101,943)

[5] Case No. 2017-00387, *Purchased Water Adjustment Filing of West McCracken Heights Water District* (Ky. PSC Jan. 10, 2017).

Revenue Requirement Determination		West McCracken
Pro Forma Operating Expenses		$ 762,919
Plus:	Average Annual Debt Principal and Interest Payments	48,967
	Debt Coverage Requirement	48,967
Total Revenue Requirement		860,853
Less:	Other Operating Revenue	(15)
	Non- Operating Revenue	(6,719)
	Interest Income	(283)
Revenue Required from Rates		853,836
Less:	Normalized Revenues from Water Sales	(634,045)
Required Revenue Increase/(Decrease)		$ 219,791

To determine the reasonableness of the rates requested by West McCracken, Staff performed a limited financial review of West McCracken'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. Mark Frost and Travis Leach reviewed the calculation of West McCracken's Overall Revenue Requirement. Jason Green reviewed West McCracken'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 West McCracken's Overall Revenue Requirement to be $836,708. A revenue increase of $175,172, or 27.93 percent, is necessary to generate the Overall Revenue Requirement.

If West McCracken wishes to request that the Commission approve a revenue increase of this amount, it should do so in its written response to this report.

2. Monthly Water Service Rates. West McCracken proposed to increase its current water service rates by approximately 10.00 percent evenly across the board. West-McCracken has not performed a cost-of-service study ("COSS"). The Commission has previously found that an across-the-board increase is an appropriate and equitable method of cost allocation in the absence of a COSS. Staff finds that an across-the-board increase to all rate classes is the appropriate means to allocate the increased revenue requirement. The rates set forth in an Attachment to this report are based upon the revenue requirement as calculated by Staff and will produce sufficient revenues from water sales to recover the $833,631 Revenue Requirement determined by Staff, an approximate 32.85 percent increase. These rates will increase a typical residential customer's monthly water bill from $25.04 to $33.28, an increase of $8.24, or approximately 32.91 percent.

3. Depreciable Lives. In this report, Staff finds that an adjustment is warranted to the depreciable life assigned to West McCracken's asset category Transmission and Distribution Mains – Account No. 331 and should be revised for ratemaking purposes. Any depreciable lives approved by the Commission in this preceding for ratemaking purposes should be used by West McCracken for all future accounting and reporting purposes. No adjustment to accumulated depreciation or retained earnings should be made to account for the retroactive cumulative effect of this change in accounting estimate.

Pro Forma Operating Statement

West McCracken's Pro Forma Operating Statement for the test year ended December 31, 2016, as determined by Staff, appears below.

	2016 Annual Report		Pro Forma Adjustments	Adj. Ref.		Pro Forma Operations
Operating Revenues:						
Revenues from Water Sales:						
Metered Water Sales:	$	634,045	$ (6,542)	A	$	627,503
Other Water Revenues:						
Forfeited Discounts		11,482				11,482
Miscellaneous Service Revenues		15,449				15,449
Total Other Water Revenues		26,931	0			26,931
Total Operating Revenues		660,976	(6,542)			654,434
Operating Expenses:						
Operation & Maintenance:						
Salaries & Wages - Employees		139,493	(1,800)	B		137,693
Salaries & Wages - Commissioners						0
Employee Pension & Benefits		33,090	(5,109)	C		27,981
Purchased Water		263,356	(17,227)	D		246,129
Purchased Power		11,951	(811)	D		11,140
Chemicals		3,752	(255)	D		3,497
Materials & Supplies		29,084				29,084
Contractual Services		34,907				34,907
Water Testing		3,041				3,041
Transportation		7,847				7,847
Insurance		33,919	(3,825)	E		30,094
Bad Debt Expense		1,684				1,684
Miscellaneous		60,224				60,224
Total Operation & Maintenance		622,348	(29,027)			593,321
Depreciation		200,611	(39,238)	F		161,373
Taxes Other Than Income		10,166				10,166
Utility Operating Expenses		833,125	(68,265)			764,860
Net Utility Operating Income	$	(172,149)	$ 61,723		$	(110,426)

(A) Billing Analysis Adjustment. West McCracken provided a billing analysis showing the gallons of water billed to retail customers during the test year. Applying the water service rates that were in effect during the test year to the water sales shown in the billing analysis, Staff determined that a billing analysis adjustment is appropriate that decreases test-year revenues by $31,413.

As previously mentioned, the Commission authorized West McCracken to increase its water rates in order to pass through the wholesale water rate increase by Paducah. By applying the retail rates authorized by the Commission in Case No. 2017-00387 to the applicable water sales shown in the billing analysis provided in West McCracken's application, Staff determined that an adjustment of $24,871 should be made to increase test-year revenues. The net adjustment to West McCracken's operating revenues is a decrease of $6,542.[6]

(B) Commissioner Fees. West McCracken reported payments to its commissioners in the amount of $1,800 in the test year. Staff requested that West McCracken provide a copy of the fiscal court minutes authorizing the payment of the commissioner fees. According to KRS 74.020(6) the commissioner fees:

> ... shall be fixed by the county judges/executive with the approval of the fiscal court; in multicounty districts, it shall be fixed by the agreement between the county judges/executive with the approval of their fiscal courts.

West McCracken was unable to provide the required approval from the judge/executive and the fiscal court in McCracken County, Kentucky. For this reason, Staff is reducing operating expenses by $1,800 by eliminating the commissioner fees.

(C) Employee Pensions and Benefits. West McCracken reported test-year employee pension expense of $32,352. West McCracken 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, West McCracken is required to contribute a percentage of its employee wages to CERS. In the fiscal year beginning July 1,

[6] $24,871 (Purchased Water Rate Adjustment) - $31,413 (Billing Analysis Adjustment) = $(6,542).

2016 the CERS contribution rate was 17.06 percent. The CERS pension expense West McCracken reported in the test year conformed to the requirements of the General Accounting Standards Board Pronouncement No. 68 ("GASB 68").

In Case No. 2016-00163,[7] the Commission discussed in great detail the reporting requirements of GASB 68 and how those requirements would impact a utility's income statement and balance sheet. In that proceeding the Commission found that the annual pension expense should be equal to the amount of a district's contributions to CERS, which historically have been "fairly constant." Staff determined that West McCracken's test-year CERS contributions totaled $27,243. Accordingly, Staff is reducing employee pension and benefits expense by $5,109.

Purchased Water. West McCracken proposed to decrease its test-year purchased water expense of $263,356 by $17,000 to reverse the impact of a large leak that occurred in the month of December 2016.[8] Staff determined West McCracken's test-year purchased water expense should be decreased by $17,227,[9] purchased power expense decreased by $2,528, and chemical expense decreased by $794, as explained below.

Changes to Wholesale Purchase Water Rate. Paducah increased its wholesale water rate sold to West MacCracken to $2.10 on October 1, 2017. Staff is increasing test-year purchased water expense by $48,792 to account for the wholesale rate of $2.10 per thousand gallons.

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[7] Case No. 2016-00163, *Alternative Rate Adjustment Filing of Marion County Water District* (Ky. PSC Nov. 10, 2016).

[8] Application, Schedule of Adjusted Operations and References.

[9] $48,792 (Wholesale Water Rate Increase) - $66,019 (Water Loss Adjustment) = ($17,227).

Test-Year Water Purchases		148,642,000
Wholesale Rate per Gallon	$	0.00210
Pro Forma Purchased Water		312,148
Less: Reported Test-Year Expense		(263,356)
Pro Forma Adjustment	$	48,792

Excess Water Loss. 807 KAR 5:066, Section 6(3),[10] limits water loss to 15 percent for ratemaking purposes unless an alternative level is found reasonable by the Commission. West McCracken reported that its test-year system flushing was 33,234,000 gallons, which represents 22.4 percent of its water purchases. In reviewing West McCracken's system flushing for the ten-years from 2007 through 2016 Staff notes that the system flushing has ranged from 2.7 percent in 2007 to the 22.4 percent in 2016, and that the ten-year average is 8 percent, as shown below

Year	Water Purchases	System Flushing	Percentage
2007	167,504	4,500	2.69%
2008	161,213	8,558	5.31%
2009	122,757	7,295	5.94%
2010	127,918	7,495	5.86%
2011	129,842	7,000	5.39%
2012	139,976	9,050	6.47%
2013	146,355	11,272	7.70%
2014	140,653	11,393	8.10%
2015	129,886	12,671	9.76%
2016	148,642	33,234	22.36%
Average			8.00%

[10] Unaccounted-for water loss. Except for purchased water rate adjustments for water districts and water associations, and rate adjustments pursuant to KRS 278.023(4), for rate making purposes a utility's unaccounted-for water loss shall not exceed fifteen (15) percent of total water produced and purchased, excluding water used by a utility in its own operations. Upon application by a utility in a rate case filing or by separate filing, or upon motion by the commission, an alternative level of reasonable unaccounted-for water loss may be established by the commission. A utility proposing an alternative level shall have the burden of demonstrating that the alternative level is more reasonable than the level prescribed in this section.

Based upon this analysis, Staff is of the opinion that the test-year flushing is excessive and that a more reasonable level would be the ten-year average. Using the average flushing rate of 8.00 percent, Staff calculates a pro forma system flushing of 11,891,360 gallons.

In the below table, Staff determined West McCracken's test-year water loss was 36.15 percent, or 21.15 percent above the 15 percent allowable limit.

Test-Year Water Purchases	148,642,000
Less: Volume Sold During the Test Year	(82,893,574)
System Flushing	(11,891,360)
Fire Department Usage	(129,000)
Water Loss	53,728,066
Divide by: Total Water Purchased	148,642,000
Percent Lost	36.15%
Allowable Water Loss	-15.00%
Excess Water Loss Percentage	21.15%

With the adjustments in the table below, Staff is removing from West McCracken's test-year operations the cost of purchasing, pumping, and treating the excess water loss.

	Purchased Power	Chemicals	Purchased Water
Pro Forma Subject to Water Loss Adjustment	$ 11,951	$ 3,752	$ 312,148
Times: Water Loss in Excess of 15 Percent	-21.15%	-21.15%	-21.15%
Pro Forma Water Loss Adjustments	$ (2,528)	$ (794)	$ (66,019)

(D) Employee Health Insurance. In the test year, West McCracken reported the payment of $18,216 in employee health insurance premiums. West McCracken currently pays 100 percent of the cost of each full-time employee's single health insurance benefit. West McCracken's three full-time employees have opted for single health insurance coverage.

In recent decisions, the Commission has decided to place a greater emphasis on evaluating employees' total compensation packages, including both salary and benefits programs, for market and geographic competitiveness to ensure the development of a fair, just and reasonable rate. It has found that in most cases, 100 percent employer-funded health and dental care does not meet those criteria.

To comply with the Commission's current practice, Staff is adjusting West McCracken's test-year expenses for employee single health insurance premiums by 21 percent, the national average employee contribution rate.[11] Accordingly, Staff reduced employee health insurance premiums by 21 percent, resulting in a decrease to Insurance in the amount of $3,825.

(E) Depreciation. In its Application, West McCracken proposed to reduce its test-year depreciation expense of $200,611 by $53,206.[12] This reduction was the result of West McCracken's request to increase the depreciable lives currently assigned to Transmission and Distribution Mains ("Mains") from a range of 25 and 50 years to 75 years.[13]

To evaluate the reasonableness of the depreciation practices of small water utilities, the Commission has historically relied upon the report published in 1979 by the National Association of Regulatory Utility Commissioners ("NARUC") titled Depreciation Practices for Small Water Utilities ("NARUC Study"). The NARUC Study found that the depreciation range for Mains is 50 to 75 years. When no evidence exists to support a specific life that is inside

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[11] Bureau of Labor Statistics, Healthcare Benefits, March 2017, Table 10, private industry workers. (https://www.bls.gov/ncs/ebs/benefits/2017/ownership/private/table10a.pdf).

[12] Application, Schedule of Adjusted Operations.

[13] *Id., References.*

or outside the NARUC ranges, the Commission has historically used the mid-point of the NARUC ranges to depreciate utility plant.

Even though West McCracken's proposed 75-year life is within the NARUC range, it has not presented any supporting evidence that its proposed depreciation life is appropriate. To comply with the Commission's past practice, Staff is reducing depreciation expense by $39,248 to reflect depreciating Mains over a 62.5-year life.

<u>Overall Revenue Requirement and Required Revenue Increase</u>

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;[14] 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 West McCracken's and Staff's calculation of the Overall Revenue Requirement and Required Revenue Increase using the DSC method is shown below:

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[14] 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)

	West McCracken	Staff
Pro Forma Operating Expenses	$ 762,919	$ 764,860
Plus: Average Annual Debt Principal and Interest Payments	48,967	59,873
Debt Coverage Requirement	48,967	11,975
Total Revenue Requirement	860,853	836,708
Less: Other Operating Revenue	(15)	(26,931)
Non- Operating Revenue	(6,719)	(6,719)
Interest Income	(283)	(283)
Revenue Required from Rates	853,836	802,775
Less: Normalized Revenues from Water Sales	(634,045)	(627,503)
Required Revenue Increase/(Decrease)	$ 219,791	$ 175,272
Percentage Increase	34.665%	27.932%

(1) Average Annual Principal and Interest Payments.

In calculating its revenue requirement, West McCracken used an average annual debt service of $48,967. Using West McCracken's bond amortization schedule, Staff calculated a three-year average debt service of $59,873, as shown below.

Year	Interest	Principal	Principal & Interest
2017	$ 16,808	$ 45,000	$ 61,808
2018	14,873	45,000	59,873
2019	12,938	45,000	57,938
Totals	44,619	135,000	179,619
3-Year Average	$ 14,873	$ 45,000	$ 59,873

(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. West McCracken's additional working capital is calculated below:

Additional Working Capital		
Annual Debt Service Payments	$	59,873
Multiplied by: DSC Coverage Ratio		1.20
Required Net Revenues		71,847
Less: Annual Debt Service		(59,873)
Allowance for Additional Working Capital	$	11,975

Signatures:

Prepared by: Travis Leach
Financial Analyst, Water and Sewer
Revenue Requirements Branch
Division of Financial Analysis

Prepared by: Mark Frost
Financial Analyst, Water and Sewer
Revenue Requirements Branch
Division of Financial Analysis

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

*West McCracken County Water District
8020 Ogden Landing Road
West Paducah, KY 42086

*Sheila Mansfield
West McCracken County Water District
8020 Ogden Landing Road
West Paducah, KY 42086