COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ALTERNATIVE RATE ADJUSTMENT FILING GARRISON-QUINCY-KY-O-HEIGHTS WATER DISTRICT	)))	CASE NO. 2013-00350

NOTICE OF FILING OF COMMISSION STAFF REPORT

Notice is hereby given that, in accordance with the Commission's Order of November 21, 2013, 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 paragraphs 2, 3, and 4 of the Commission's November 21, 2013, Order, Garrison-Quincy-KY-O-Heights Water District is required to file written comments regarding the findings of Commission Staff no later than January 31, 2014.

Jeff Derouen
Executive Director
Public Service Commission
P.O. Box 615
Frankfort, KY 40602

DATED JAN 17 2014

cc: Parties of Record

STAFF REPORT

ON

GARRISON-QUINCY-KY-O-HEIGHTS WATER DISTRICT

CASE NO. 2013-00350

Garrison-Quincy-KY-O-Heights Water District ("Garrison-Quincy") operates a Water Division that provides water service to approximately 1,079 customers residing in Lewis County, Kentucky,[1] and a Sewer Division that provides wastewater service to approximately 314 customers.[2] On September 24, 2013, Garrison-Quincy tendered an application to the Commission pursuant to 807 KAR 5:076 requesting to increase its water service rates through a phase-in plan. Pursuant to the plan, Garrison-Quincy

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[1] *Annual Report of Garrison-Quincy-KY-O-Heights Water District (Water Division) to the Public Service Commission for the Calendar Year Ended December 31, 2012 ("2012 Water Annual Report")* at 48.

[2] *Annual Report of Garrison-Quincy-KY-O-Heights Water District (Wastewater Division) to the Public Service Commission for the Calendar Year Ended December 31, 2012* at 27.

proposes to increase its rates in three phases over a two-year period in order to ultimately increase annual water sales revenues by $191,351, or 52.09 percent.[3]

In support of its requested rate phase-in plan, Garrison-Quincy provided financial exhibits with its Application that were based on the test year ended December 31, 2012. These exhibits are shown below in condensed form and demonstrate that a revenue increase of $184,863, or 45.17 percent, is warranted. Garrison-Quincy did not reconcile the difference between the 52.09 percent revenue increase requested in its Application and the 45.17 percent supported by its financial exhibits.

[3] Pursuant to the proposed rate phase-in plan, Phase 1 rates would become effective immediately upon the Commission's approval and would remain in effect for one year. Phase 1 rates would increase test-year revenues by $55,105, or 15 percent. Phase 2 rates would become effective upon the completion of Phase 1 rates and would remain in effective for one year. Phase 2 rates would increase Phase 1 revenues by $63,370. Phase 3 rates would become effective upon the completion of Phase 2 rates and would remain in effect until ordered changed by the Commission. Phase 3 rates would increase Phase 2 revenues by $72,876, or 15 percent. As shown in the table below, the cumulative increase to test-year revenues from the phase-in plan is $191,351, or 52.09 percent.

	Annual Water Sales Prior to Increase	Annual Water Sales Subsequent to Increase	15 Percent Increase
Phase 1	$ 367,365	$ 422,470	$ 55,105
Phase 2	422,470	485,840	63,370
Phase 3	485,840	558,716	72,876
Total Revenue Increase			191,351
Divide by: Test-Year Revenue			367,365
Total Percentage Increase			52.09%

Pro Forma Operating Expenses	$ 493,158
Plus: Average Annual Debt Principal and Interest Payments	56,768
Debt Service on Planned Facility Upgrades	40,930
Debt Coverage Requirement	5,677
Overall Revenue Requirement	596,533
Less: Other Operating Revenue	(2,377)
Revenue Required From Rates	594,156
Less: Pro Forma Present Rate Water Sales	(409,293)
Required Revenue Increase	$ 184,863
Required Revenue Increase as a Percentage	45.17%

Staff performed a limited financial review of Garrison-Quincy's operations for the test year ended December 31, 2012, to determine the reasonableness of Garrison-Quincy's requested water rate plan. Because Garrison-Quincy operates its water and sewer divisions with shared employees, equipment, supplies, and office facilities, numerous test-year transactions were reported in each division's financial statements to account for the use of shared resources. To adequately review these transactions, Staff's field work was expanded to include sewer 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 or immaterial discrepancies were not pursued and were not addressed.

Staff's findings are summarized in this report. Ariel Turnbull reviewed the calculation of Garrison-Quincy's Overall Revenue Requirement. Eddie Beavers reviewed reported revenues and rate design.

Summary of Findings

1) Overall Revenue Requirement and Required Revenue Increase. Staff found that Garrison Quincy can justify a total Overall Revenue Requirement of $800,471 and that a $227,870 revenue increase is warranted. These amounts were separated between the divisions as follows.

	Total	Water	Sewer
Pro Forma Operation and Maintenance Expense	$ 474,862	$ 315,511	$ 159,351
Pro Forma Taxes Other Than Income	15,721	9,870	5,851
Pro Forma Depreciation/Allowance for Working Capital	205,286	103,866	101,420
Total Pro Forma Operating Expenses	695,869	429,247	266,622
Plus: Average Debt Principal and Interest Payments	87,168	56,768	30,400
Allowance for Additional Working Capital	17,434	11,354	6,080
Overall Revenue Requirement	800,471	497,369	303,102
Less: Total Annual Present Rate Revenue	(572,601)	(409,114)	(163,487)
Revenue Required From Rates	$ 227,870	$ 88,255	$ 139,615
Percentage Rate Increase Warranted		24.02%	88.26%

As shown above, Garrison-Quincy's current water service rates may be increased by up to 24.02 percent to generate $88,255 in additional annual revenues and Garrison-Quincy may consider filing an application with the Commission seeking to increase sewer rates by up to 88.26 percent. When considering sewer rates, Garrison-Quincy should note that, based on Staff's review, an increase of at least

$32,115, or 20.30 percent,[4] is necessary for the Sewer Division to generate revenues that are sufficient to pay its cash-related expenses and to pay principal and interest on Rural Development of the Department of Agriculture of the United States of America ("RD") bonds that were assumed to construct sewer assets. Absent a 20.30 percent sewer rate increase, water revenues will subsidize sewer operations.

2) Water Rates. Garrison-Quincy proposes an across-the-board increase in rates is to be placed into effect over a three-year period with an increase of 15 percent each year. Garrison-Quincy has not performed a cost-of-service study. 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 cost-of-service study. The Commission has also previously found that a phased-in approach as proposed by Garrison-Quincy is an appropriate and equitable method of placing a large rate increase in effect to lessen the impact on the utility's customers. Given this precedent, Staff finds that an across-the-board increase and a phased-in rate increase is the appropriate means to allocate the increased revenue requirement. The rates set forth in Appendix B to this report are based upon this methodology and will produce revenues of $455,620 from water sales. The revenue requirement as calculated by Staff is less than the

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Total Revenues at Present Rates		$ 163,487
Less:	Pro Forma Operation and Maintenance Expense	(159,351)
	Pro Forma Taxes Other Than Income	(5,851)
	Average Annual Debt Payments	(30,400)
Cash Flow Deficit		(32,115)
Divide by:	Sewer Service Revenues at Present Rates	158,183
Percent Increase		20.30%

requested amount. Therefore, these rates have been calculated to occur over a two-year period instead of the requested three-year period and the total percentage increase for the two years equals approximately the 24.02 percent.

3) <u>Internal Controls</u>. Garrison-Quincy maintains a single general ledger for its Water Division and Sewer Division wherein it records all transactions for both divisions. Separate accounting of all transactions for each division is maintained within the general ledger except for cash. Cash is commingled.

Separate cash accounts must be maintained and all cash transactions accounted for separately to comply with the Uniform System of Accounts ("USoA") applicable to Garrison-Quincy. Garrison-Quincy should comply with the requirements of the USoA and separate the accounting for cash. Garrison-Quincy should consider maintaining separate general ledgers for each division. While Staff does not recommend that the Commission require the use of separate ledgers, it is the opinion of Staff that such practice would strengthen internal controls.

Rate-making adjustments were necessary to properly allocate many test-year transactions that were shared by the divisions.[5] In future reporting periods, Garrison-Quincy should allocate shared transactions using reasonable allocation factors and methods and should document these factors and methods in written accounting policies

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[5] When allocating administrative and general transactions, Staff applied the number of customer allocation factor calculated below.

Water Customers	1,079	77.46%
Sewer Customers	314	22.54%
Total Customers	1,393	100%

and procedures that its Board of Commissioners formally approves. Absent the recommended changes to internal controls, Staff finds that subsidization between the Water and Sewer Divisions may occur and go undetected.

4) <u>Depreciation</u>. As set out in Appendix B of this report, it is Staff's opinion that the depreciable lives assigned to certain assets should be changed for ratemaking purposes and that these lives should be used for accounting purposes in all future reporting periods. These recommended depreciable lives better match the life expectancy of Garrison-Quincy's assets, will better match expenses to revenues, and will minimize the erosion of Garrison-Quincy's equity. No adjustment to accumulated depreciation and retained earnings should be made to account for the retroactive effect of this recommended change in accounting estimate.

<u>Pro Forma Operating Statements</u>

Each division's Pro Forma Operating Statement based on test-year operations ended December 31, 2012, as determined by Staff is shown below.

Water Division

	Test Year	Adjustment	(Ref.)	Pro Forma
Operating Revenues				
Sales of Water	$ 408,954	$ (44,399)	(A)	
		2,810	(B)	$ 367,365
Other Water Revenue	2,377	18,225	(A)	
		(2,377)	(C)	18,225
Total Operating Revenues	411,331	(25,741)		385,590
Operating Expenses				
Operation and Maintenance Expenses				
Salaries and Wages - Employees	124,967	(3,862)	(D)	121,105
Salaries and Wages - Commissioners	5,060			5,060
Employee Pensions and Benefits	44,241	(7,821)	(E)	
		(4,765)	(F)	31,655
Purchased Water	32,484	(3,372)	(G)	29,112
Purchased Power for Pumping	25,346	(2,631)	(G)	22,715
Purchased Power, Office	1,528			1,528
Chemicals	2,511	(261)	(G)	2,250
Materials and Supplies	50,619	(3,300)	(H)	47,319
Contractual Services	42,104	(8,250)	(I)	
		(6,400)	(J)	27,454
Advertising/Rents	247			247
Transportation Expenses	6,251			6,251
Insurance	19,616	(2,757)	(K)	
		(1,282)	(L)	
		(1,546)	(M)	14,032
Regulatory Commission Expense	831			831
Bad Debt Expense	2,300			2,300
Misc. Expense	30,590	(15,442)	(N)	15,148
Allocation of Shared Expenses		(11,497)	(O)	(11,497)
Total Operation and Maintenance Expenses	388,695	(73,184)		315,511
Taxes Other Than Income	12,263	(12,263)	(P)	
		9,870	(Q)	9,870
Depreciation	97,829	6,037	(R)	103,866
Total Operating Expenses	498,787	(69,540)		429,247
Net Operating Income	(87,456)	43,798		(43,658)
Interest Income		339	(C)	339
Donated Capital - Surcharge		23,185	(A)	23,185
Income Available to Service Debt	$ (87,456)	$ 67,322		$ (20,134)

Sewer Division

	Test Year	Adjustment	(Ref.)	Pro Forma
Sewer Operating Revenues				
Measured Sewer Revenues	$ 148,673	$ 11,548	(A)	
		(2,038)	(C)	$ 158,183
Miscellaneous Operating Revenues		5,304	(A)	5,304
Total Operating Revenues	148,673	14,814		163,487
Operating Expenses				
Operation and Maintenance Expenses				
Collection System /Pumping System - Labor, Materials, and Expenses	40,386	31,201	(D)	71,587
Employee Benefits		14,233	(E)	14,233
		4,765	(F)	4,765
Fuel and Purchased Power	15,025			15,025
Miscellaneous General Expenses	15,323	(13,680)	(H)	1,643
Outside Services Employed	14,400	8,250	(I)	22,650
Administrative and General Expenses				
Office Supplies	5,269			5,269
Maintenance of General Plant	5,630			5,630
Insurance		2,757	(K)	
		1,282	(L)	
		3,014	(M)	7,052
Allocation of Shared Expenses		11,497	(O)	11,497
Total Operation and Maintenance Expenses	96,033	63,318		159,351
Taxes Other Than Income		5,851	(Q)	5,851
Depreciation	77,667	23,753	(R)	101,420
Total Operating Expenses	173,700	92,922		266,622
Net Operating Income	(25,027)	(78,108)		(103,135)
Miscellaneous Nonoperating Income	25,129	(25,129)	(S)	
Income Available to Service Debt	$ 102	$ (103,237)		$ (103,135)

(A) Water and Sewer Revenue from Rates for Service. The Water Division and the Sewer Division reported test-year service revenues of $408,954 and $148,673, respectively. Staff determined that the journal entry shown below is necessary to correct the test-year amounts. The journal entry represents adjustments to multiple general ledger accounts that would not appear on Garrison-Quincy's operating statement. These adjustments were necessary in order to derive the adjustment to water sales.

	Debit	Credit	Ref
Water Sales	$ 44,399		
Retained Earnings, Water	15,053		(1)
Retained Earnings, Sewer	11,548		(1)
Measured Revenues - Sewer		11,548	(1)
Taxes Payable		739	(2)
Other Water Operating Revenues		18,225	(3)
Other Sewer Operating Revenues		5,304	(3)
CIAC - Water Tap Fees		5,800	(4)
CIAC - Sewer Tap Fees		6,200	(4)
CIAC - Surcharges		23,185	(5)

(1) Retained Earnings. The district's independent auditor advised that the test-year balances shown in the Water Division's and the Sewer Division's accounts receivable subsidiary ledgers were overstated as a result of prior period accounting errors in the amounts of $15,053 and $11,548, respectively. The auditor reduced accounts receivable and test-year revenues to correct these errors. Staff agrees with the reduction to accounts receivable but not to revenues. Instead, the reduction should have been charged to retained earnings. Staff's adjustment corrects this error.

(2) Taxes Payable. Garrison-Quincy collects and remits school taxes on behalf of the Lewis County Board of Education. Garrison-Quincy improperly included $739 of school taxes receivable in test-year Water Sales Revenue. Staff's adjustment removes this amount.

(3) Other Operating Revenue. During the test-year, the Water Division and Sewer Division recognized $23,529 for combined non-recurring charge revenues excluding tap-on fees. The entire amount was reported by the Water Division as Water Sales

Revenue. Staff's journal entry reclassifies this revenue to Other Operating Revenues of each division using the number of customer allocation factor as shown below.[6]

	Number of Customer Allocation Factor	Other Operating Revenue
Water Customers	77.46%	18,225
Sewer Customers	22.54%	5,304
Total Customers	100%	23,529

(4) Tap Fees. Garrison-Quincy reported water tap fees of $5,800 and sewer tap fees of $6,200 as Water Sales Revenue. The Uniform System of Accounts requires that the water fees be accounted for as Donated Capital and that the sewer fees be accounted for as Contributions in Aid of Construction.[7] Staff's entry is necessary to comply with the USoA accounting requirements, and not as revenue to the utility.

(5) Water Surcharge. Garrison-Quincy currently assesses a $5 monthly surcharge to all customers receiving water service through the Phase II and

[6] Allocation of Other Operating Revenues was necessary due to the absence of detailed accounting records. In future reporting periods, all Other Operating Revenues should be recognized by the division that earns the revenue if Garrison-Quincy's accounting system will allow for such recognition. If its accounting system will not allow for this recognition, Garrison-Quincy should allocate other revenues between the divisions using reasonable allocation methods and factors.

[7] USoA for Water Districts and Associations, at 57; and USoA for Sewer Utilities, at 61.

Phase III water main extension projects that were authorized by the Commission in Case No. 1996-00285[8] and Case No. 2002-00181,[9] respectively. All surcharge revenue must be used to pay a portion of the principal and interest payments on the long-term debts that were used to finance the projects. The surcharge revenue is Donated Capital that should be included in the calculation of income available to service long-term debt. Staff's journal entry reclassifies the $23,185 test-year surcharge income from Water Sales Revenues to Donated Capital.

(B) Billing Analysis Adjustment. Garrison-Quincy provided a billing analysis with its application that calculated water sales revenue of $367,365 for all customers. Water Sales revenue was adjusted by $2,810.

(C) Other Water Revenue. Garrison-Quincy reported $2,377 for test-year Other Water Revenue. This amount included $339 for interest income. Interest income should be reported in account 419, Interest and Dividend Income. Staff reclassified the test-year amount.[10] As explained below, the remaining $2,038 reported as Other Water Revenue is related to sewer service revenues.

Garrison-Quincy's sewer service revenues are determined by applying a volumetric declining block rate to each customer's monthly metered water usage. Each customer that operates a swimming pool is allowed one annual sewer-bill credit for water used to fill the pool. Test-year pool credits totaled $2,038. These credits were

[8] Application of Garrison-Quincy-KY-O-Heights Water District of Lewis County Kentucky for a Certificate of Public Convenience and Necessity to Construct, Finance, and Increase Rates Pursuant to the Provisions of KRS 278.023 (Ky. PSC Aug. 16, 1996).

[9] Application of Garrison-Quincy-KY-O-Heights Water District of Lewis County Kentucky for a Certificate of Public Convenience and Necessity to Construct, Finance, and Increase Rates Pursuant to the Provisions of KRS 278.023 (Ky. PSC June 25, 2002).

[10] It would be appropriate to allocate a portion of interest income to the Sewer Division, but no allocation was made due to materiality.

improperly recorded as an increase to the Water Division's test-year Other Water Revenues. The credits should have been reported as a decrease to the Sewer Division's Measured Sewer Revenues. Staff corrected this accounting error.

(D) Salaries and Wages – Employees. During the test year, Garrison-Quincy reported $165,353 for total test-year wages; $124,967 was reported by the Water Division and $40,386 was reported by the Sewer Division. As discussed in detail below, Staff decreased test-year water wages by $3,862 and increased sewer wages by $31,201.

First, Staff determined total pro forma salaries to be $200,450 by applying each employee's current pay rate by 2,080 regular work hours and the employee's test-year overtime hours. This method accounts for current wage rates and annualizes test-year wages paid to an employee hired during the test year.

	Current Pay Rate	Regular Hours	Overtime Hours (x1.5)	Pro Forma
Office Employees				
Employee 1	$ 12.20	2,080	67.83	$ 26,617
Employee 2	12.20	2,080	77.67	26,797
Field Employees				
Employee 3	12.75	2,080	106.33	28,554
Employee 4	16.65	2,080	263.67	41,217
Employee 5	10.10	2,080	16.00	21,250
General Manager, Salaried				56,014
Pro Forma Wages				$ 200,450

As shown and discussed below, Staff allocated $125,106 of the pro forma wages to the Water Division. The remaining $75,345 was allocated to the Sewer Division.

		Allocated To	
	Pro Forma	Water Division	Sewer Division
Office Employees			
Employee 1	$ 26,617	$ 20,617	$ 6,000
Employee 2	26,797	20,757	6,040
Field Employees			
Employee 3	28,554	13,633	14,920
Employee 4	41,217	19,679	21,538
Employee 5	21,250	15,459	5,792
Total Office and Field Employees	144,436	90,146	54,290
General Manager	56,014	34,960	21,055
Pro Forma	$ 200,450	$ 125,106	$ 75,345
Allocation Percentage	100.00%	62.41%	37.59%

Office Employees. Garrison-Quincy has two full-time office employees who perform administrative duties for both divisions. The amount of time these employees dedicate to a division is directly related to the number of customers served by the division. Accordingly, Staff allocated office wages using the number of customer allocation factor. Staff's allocation is shown below.

		Allocated To	
	Pro Forma	Water Division 77.46%	Sewer Division 22.54%
Office Employees			
Employee 1	$ 26,617	$ 20,617	$ 6,000
Employee 2	26,797	20,757	6,040

Field Employees. Garrison-Quincy employs three full-time employees who operate and maintain the distribution, collection, and treatment facilities of each division. Ideally, these employees would use direct-time reporting to directly charge actual time worked to the appropriate division.[11] Absent direct-time reporting, allocations were made using time estimates provided by Garrison-Quincy personnel.

Garrison-Quincy estimated that field employees 3 and 4 split time equally between the divisions while employee 5 is split 75 percent to the Water Division and 25 percent to the Sewer Division. Each employee's water estimate includes 10 percent for meter reading. Because both water revenues and sewer revenues are calculated using meter readings, meter reading was split between the divisions using the number-of-customer allocation factor. The resulting field-employee allocation factors are shown below.

	Employees 3 and 4		Employee 5	
	Water Division	Sewer Division	Water Division	Sewer Division
Estimated Time Including Meter Reading	50%	50%	75%	25%
Remove Meter Reading	-10%		-10%	
No Meter Reading	40%	50%	65%	25%
Add: Allocate Meter Reading on Number of Customers	7.75%	2.25%	7.75%	2.25%
Final Allocation	47.75%	52.25%	72.75%	27.25%

Application of these factors results in the following allocation of pro forma field employee wages.

[11] Through direct-time reporting, employees separately report actual hours worked for each division on a daily timecard. The timecards are then used to pay wages and wage overhead charges from the appropriate division.

		Allocated To	
		Water	Sewer
	Pro Forma	Division	Division
Field Employees			
Employee 3	$ 28,554	$ 13,633	$ 14,920
Employee 4	41,217	19,679	21,538
Employee 5	21,250	15,459	5,792

General Manager. The General Manager directs and oversees the duties of all employees. Staff allocated the manager's pro forma salary based on the pro forma wage allocations of all other employees as shown below.

		Allocated To	
		Water	Sewer
	Pro Forma	Division	Division
Office and Field Employees	$ 144,436	$ 90,146	$ 54,290
Percent Allocated	100%	62.41%	37.59%
General Manager	$ 56,014	$ 34,960	$ 21,055

Staff determined each division's pro forma wage expense by multiplying its total allocated pro forma wages by its test-year wage expense ratio.[12] As shown below, Staff determined that the Water Division's test-year expense should be reduced by $3,862 and that the Sewer Division's should be increased by $31,201.

[12] During the test-year, Garrison-Quincy installed 11 new water taps and one new sewer tap. Garrison-Quincy expensed all costs incurred to make the new connections. These costs include employee wages, wage overhead charges, materials and supplies, transportation costs, insurance, and depreciation on equipment. Proper accounting requires that these costs be capitalized as Utility Plant in Service and depreciated over their estimated useful lives.

Following proper accounting principles, Staff removed the estimated cost of the connections from test-year expenses and included a provision for their recovery in pro forma depreciation expense. To make the adjustment, Staff assumed that the total connection costs were equal to the tap fees collected by Garrison-Quincy to recover the cost of the installations. The cost of the water connections is estimated to be $6,600 ($600 tap fee x 11 taps). The estimated cost of the sewer connection is $6,200.

Ideally, each expense account that contains installation costs would be reduced by a portion of the capitalized costs but, for simplicity, Staff only decreased wages expense and materials and supplies expense by one-half of the connection costs. The Water Division's wage expense and materials expense were decreased by $3,300, while each account of the Sewer Division was decreased by $3,100. Staff's capitalization adjustment results in the wage expense ratios and the wage capitalization ratios for each division as shown below.

		Water Division		Sewer Division	
	Total	Wages	Ratio	Wages	Ratio
Expense	$ 158,953	$ 99,901	96.80%	$ 59,052	95.01%
Capitalize	6,400	3,300	3.20%	3,100	4.99%
Total	$ 165,353	$ 103,201	100%	$ 62,152	100%
Percent Allocated	100%	62.41%		37.59%	

	Water Division	Sewer Division
Office and Field Employees	$ 90,146	$ 54,290
General Manager	34,960	21,055
Total Pro Forma	125,106	75,345
Times: Test-Year Expense Ratio	96.80%	95.01%
Pro Forma Expense	121,105	71,587
Less: Test-Year	(124,967)	(40,386)
Adjustment	$ (3,862)	$ 31,201

(E) Employee Retirement Benefits. Garrison-Quincy participates in the County Employee Retirement System. The Water District improperly reported all test-year retirement contributions as a water expense. To correct this accounting error, and to account for the change to the retirement contribution rate that became effective on July 1, 2013, Staff applied the current contribution rate to the pro forma wages allocated to each division. As a result, Staff decreased the Water Division's test-year expenses by $7,821 and increased the Sewer Division's by $14,233 as shown below.

	Water Division	Sewer Division
Pro Forma Wage Expense Subject to Retirement	$ 125,106	$ 75,345
Times: Current Retirement Contribution Rate	18.89%	18.89%
Pro Forma Retirement Expense	23,632	14,233
Less: Test Year	(31,453)	
Adjustment	$ (7,821)	$ 14,233

(F) Employee Health Insurance Benefits. Garrison-Quincy reported all test-year health insurance benefits as an expense to the Water Division. Staff split the test-year amount between the divisions using the final wage allocation factors. This requires that $4,765 be reclassified from the Water Division to the Sewer Division as shown below.

		Water Division	Sewer Division
Pro Forma Wage Allocation Percentages	100.00%	62.41%	37.59%
Health Insurance	$ 12,678	$ 7,913	$ 4,765
Less: Test Year		(12,678)	
Adjustment		$ (4,765)	$ 4,765

(G) Water Loss. Using information provided by Garrison-Quincy, Staff determined that the Water Division's test-year water loss was 25.38 percent,[13] or 10.38 percent above the 15 percent allowed by 807 KAR 5:066, Section 6(3) for ratemaking purposes. As calculated below, Staff removed the cost to purchase, pump, and treat water loss that was above the allowable limit.

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Water Purchased and Produced	65,342,300
Less: Water Sold, See Billing Analysis in Application	(47,495,390)
Water Used at Treatment Plant	(101,113)
Water Used for Flushing	(1,098,120)
Water Provided to Sewer Plant	(37,430)
Fire Department Use	(27,800)
Water Loss	16,582,447
Water Loss Percentage	25.38%

	Test Year	Excess Water Loss Percentage	Decrease
Purchased Water	$ 32,484	-10.38%	$ (3,372)
Purchased Power for Pumping	25,346	-10.38%	(2,631)
Chemicals	2,511	-10.38%	(261)

(H) Materials and Supplies Capitalized. As previously discussed, Staff reduced the Water Division's and the Sewer Division's test-year materials and supplies expense by $3,300 and $3,100, respectively, to capitalize the cost of materials used to install 11 new water connections and a new sewer connection. Depreciation to be accrued on these assets was included in Staff's calculation of pro forma depreciation expense.

Staff also removed from sewer materials and supplies $10,580 that was reported for the purchase of a mower and a trailer. The total reduction to sewer materials expense is $13,680 ($3,100 + $10,580). Depreciation on the mower was included in the Water Division's test-year depreciation expense. Staff included depreciation for the trailer in the Sewer Division's pro forma depreciation expense. The depreciation expense recognized on the mower and trailer was allocated between the divisions in Staff's allocation adjustment shown in Reference Item (O).

(I) Contractual Services – Sewer Certified Operator. During the test-year, Garrison-Quincy retained Chad Clark as the Sewer Division's certified operator. Test-year fees totaling $8,250 were erroneously reported by the Water Division. Staff reclassified this amount to the Sewer Division in pro forma operations.

(J) Contractual Services – Reimbursed Expense. Garrison-Quincy incurred flood damage in 2011 for which it received reimbursement from the Federal Emergency Management Agency. A portion of the reimbursed flood repair costs, $6,400, was erroneously reported by the Water Division as a test-year expense. Staff removed this amount to calculate pro forma operations.

(K) Insurance – General Liability. Garrison-Quincy incurred $9,656 for test-year general liability insurance expense that was reported entirely by the Water Division. The test-year amount should be allocated between the divisions. Because general liability insurance premiums are generally dependent on the level of an entity's annual revenues[14], Staff allocated the test-year amount based on each division's pro forma present rate revenues as determined by Staff. Staff's calculations are shown below.

	Test Year	Water Division	Sewer Division
Pro Forma Present Rate Revenues	$ 572,600	$ 409,114	$ 163,487
Percent of Total	100.00%	71.45%	28.55%
Allocated General Liability	$ 9,656	$ 6,899	$ 2,757
Less: Test Year		(9,656)	-
Adjustment		$ (2,757)	$ 2,757

(L) Insurance – Workers' Compensation. Garrison-Quincy incurred $3,410 for test-year workers' compensation insurance that was reported entirely by the Water

[14] Water revenues include operating revenues of $385,590, interest income of $339, and donated capital surcharge of $23,185.

Division. As shown below, Staff allocated the test-year between the divisions based on Staff's pro forma employee wage expense allocations.

	Test Year	Water Division	Sewer Division
Pro Forma Employee Wages Expense	$ 200,450	$ 125,106	$ 75,345
Percent of Total	100.00%	62.41%	37.59%
Allocated Workers' Compensation	$ 3,410	$ 2,128	$ 1,282
Less: Test Year		(3,410)	-
Adjustment		$ (1,282)	$ 1,282

(M) Insurance – 401(k) Contributions. Garrison-Quincy contributes 4 percent of employee wages to a qualified deferred tax retirement account as defined by subsection 401(k) of the internal Revenue Tax Code. All test-year contributions were reported by the Water Division. Staff made the following adjustments to allocate pro forma contributions to the appropriate division.

	Water Division	Sewer Division
Pro Forma Wages Expense	$ 125,106	$ 75,345
Times: Contribution Rate	4%	4%
Pro Forma Expense	5,004	3,014
Less: Test Year	(6,550)	
Adjustment	$ (1,546)	$ 3,014

(N) Miscellaneous Expenses. Garrison-Quincy reported payroll taxes of $15,442 as a Water Division Miscellaneous Expense. Staff reclassified these taxes to Taxes Other Than Income.

(O) Allocation of Shared Expenses. The following test-year expenses benefited both divisions but were not allocated between the divisions. Staff allocated these expenses using the number of customer allocation factor as shown below.

	Test-Year Expense			Allocate	
				77.46%	22.54%
	Water Division	Sewer Division	Total	Water Division	Sewer Division
Salaries and Wages - Commissioners	$ 5,060		$ 5,060	$ 3,919	$ 1,141
Purchased Power Office	1,528		1,528	1,184	344
Materials and Supplies, Office	12,530	$5,269	17,799	13,787	4,012
Contractual Services, Office Cleaning	1,300		1,300	1,007	293
Contractual Servies, Audit Fee	9,000		9,000	6,971	2,029
Contractual Services, Kentucky Rural Water Association Fees	2,398		2,398	1,858	541
Advertising	247		247	191	56
Transportation	6,251	334	6,585	5,101	1,484
Regulatory Commission Expense	831		831	644	187
Bad Debt Expense	2,300		2,300	1,782	518
Miscellaneous Expense, Excludes Taxes	15,149		15,149	11,734	3,415
Depreciation on Shared Assets	14,119	133	14,252	11,039	3,213
Total	$70,713	$5,736	$76,449	59,217	17,233
Less: Test-Year				(70,713)	(5,736)
Adjustment				$ (11,497)	$ 11,497

(P) Taxes Other Than Income – School Taxes. Garrison-Quincy collects and remits school taxes from its customers on behalf of the Lewis County Board of Education. It also collects sales taxes on commercial accounts that are remitted to the Commonwealth of Kentucky. Garrison-Quincy acts as a collecting agent for the taxing authorities. The collection of these taxes is not a revenue to the utility. Likewise, the tax remittances are not an expense. Garrison-Quincy improperly reported remittances of $12,263 as a test-year water expense. Staff removed this amount.

(Q) Taxes Other Than Income – Payroll Taxes. Below, Staff calculated each division's pro forma payroll taxes by multiplying its pro forma taxable wages by the payroll tax rate.

		Allocated To	
	Pro Forma	Water Division	Sewer Division
Employee Wages	$ 200,450	$ 125,106	$ 75,345
Commissioner Wages	5,060	3,919	1,141
Total Wages Subject to Payroll Taxes	205,510	129,025	76,485
Times: Tax Rate	7.65%	7.65%	7.65%
Payroll Tax Expense	$ 15,722	$ 9,870	$ 5,851

(R) Depreciation. Garrison-Quincy reported $97,829 for test-year water depreciation expense and $77,667 for sewer depreciation expense. These amounts were calculated by dividing the plant's original cost by its estimated useful life. A summary of Staff's review of the estimated useful lives is found at Attachment B of this report. To account for the effects of the changes to the lives recommended in Attachment B and to allow for recovery of depreciation on the new service connections and trailer capitalized by Staff, Staff increased test-year water depreciation by $6,037 and increased test-year sewer depreciation by $23,753 as calculated below.[15]

[15] The adjustment shown in Reference Item (O) includes an allocation of pro forma depreciation accrued on assets shared by the divisions.

Water Division

Asset	Original Cost	Useful Life Garrison-Quincy	Useful Life Staff	Pro Forma
Pump House	$ 300,000	50	37.5	$ 8,000
Ford F-150	15,938	10	7	2,277
Chevy Truck	17,756	10	7	2,537
Telemetry Equipment	17,845	20	10	1,785
DLXI Locator	4,060	10	17.5	232
Collecting Reservoirs (Concrete Backwash Pit)	42,579	45	37.5	1,135
Wells and Springs	94,229	45	30	3,141
Wells and Springs	42,622	45	30	1,421
New Connections	6,600		40	165
Pro Forma				20,692
Less: Test-Year Depreciation on Assets Listed in the Adjustment				(14,655)
Increase				$ 6,037

Sewer Division

Asset	Original Cost	Useful Life Garrison-Quincy	Useful Life Staff	Pro Forma
Sewer Plant	$ 1,150,000	50	25	$ 46,000
New Connection	6,200		10	620
Trailer	1,995		15	133
Pro Forma				46,753
Less: Test-Year Depreciation on Assets Listed in the Adjustment				(23,000)
Increase				$ 23,753

(S) Miscellaneous Nonoperating Income. During the test-year, the Sewer Division recognized grant receipts totaling $25,129 as Miscellaneous Nonoperating Income. This accounting treatment recognized the receipt as revenue on the income statement that flowed through to Retained Earnings on the Balance Sheet. Proper accounting requires that these receipts be reported directly to the balance sheet as a Contribution in Aid of Construction.[16] Accordingly, Staff removed the grant receipts from the calculation of income.

Overall Revenue Requirement and Required Revenue Increase

Garrison-Quincy and Staff used the Debt Service Coverage ("DSC") method as generally accepted by the Commission to calculate the Overall Revenue Requirements. 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;[17] 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 Garrison-Quincy's and Staff's calculation of the Water Division's Overall Revenue Requirement and Required Revenue Increase is shown below, as well as Staff's calculations for the Sewer Division.

[16] USoA for Sewer Utilities, at 61.

[17] 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 to be used 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).

		Staff		
	Garrison-Quincy	Water Division	Sewer Division	(Ref.)
Pro Forma Operation and Maintenance Expense	$ 395,329	$ 315,511	$ 159,351	
Pro Forma Taxes Other Than Income		9,870	5,851	
Pro Forma Depreciation	97,829	103,866	101,420	
Total Pro Forma Operating Expenses	493,158	429,247	266,622	
Plus: Average Annual Principal				
and Interest Payments on Current Debts	56,768	56,768	30,400	(1)
Principal and Interest Payments on Future Debts	40,930			(2)
Additional Working Capital	5,677	11,354	6,080	(3)
Overall Revenue Requirement	596,533	497,369	303,102	
Less: Other Operating Revenue	(2,377)	(18,225)	(5,304)	
Interest Income		(339)		
Donated Capital - Surcharge		(23,185)		
Revenue Required From Rates	594,156	455,620	297,798	
Less: Pro Forma Present Rate Service Revenues	(409,293)	(367,365)	(158,183)	
Required Revenue Increase	$ 184,863	$ 88,256	$ 139,615	
Pecent Increase	45.17%	24.02%	88.26%	

1) Average Principal and Interest Payments on Current Debts. Garrison-Quincy currently has outstanding bonds payable to RD. In its Application, Garrison-Quincy requested recovery of the three-year average principal and interest payments due in 2012, 2013, and 2014 on all bonds that were used to finance the cost of water system improvement projects. Staff agrees that the $56,768 requested by Garrison-Quincy represents, in all material respects, the average annual debt payments that will be made on the Water Division's long-term debts in each year that the water rates approved by the Commission in this proceeding will be in effect. Staff calculated Sewer Division's three-year average debt payment to be $30,400.

2) Principal and Interest Payments on Future Debts. In its Application, Garrison-Quincy requested recovery of $40,930 for principal and interest payments on future debts that it states will be assumed to finance the cost of capital improvement projects. As of the date of this report, Garrison-Quincy had not petitioned the Commission for authority to assume additional long-term indebtedness as required by KRS 278.300. Absent Commission authorization to assume additional indebtedness, rate recovery of the additional debt payments is not appropriate.

3) Additional Working Capital. In addition to depreciation expense, Garrison-Quincy requested recovery of an allowance for working capital that is equal to 10 percent of its average annual RD bond payments. Historically, the Commission allows a water district recovery of additional working capital that is equal to the minimum net revenues required by a district's lenders that are above the district's average annual debt payments. In this case, RD requires that Garrison-Quincy charge rates that produce net revenues that are at least 120 percent of its average annual bond payments. Following the Commission's historic practice, Staff calculated Garrison-Quincy's allowance for additional working capital as follows.

	Water Division	Sewer Division
Average Annual Principal and Interest	56,768	$ 30,400
Times: DSC Coverage Ratio	120%	120%
Total Net Revenues Required	68,122	36,480
Less: Average Annual Principal and Interest Payments	(56,768)	(30,400)
Additional Working Capital	$ 11,354	$ 6,080

Based on the calculation of the overall Revenue Requirement using the Debt Service Coverage Method, Staff is of the opinion that Garrison-Quincy requires an increase to Water Sales Revenue of 24.02 percent and Sewer Sales Revenue of 88.26 percent.

Signatures

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ATTACHMENT A
STAFF REPORT CASE NO. 2013-00350
RATES CALCULATED BY STAFF
Monthly Rates

Phase 1

5/8- x 3/4-Inch Meter				
First	2,000	Gallons	$ 18.52	Minimum Bill
Next	3,000	Gallons	7.27	per 1,000 Gallons
Next	5,000	Gallons	6.08	per 1,000 Gallons
All Over	10,000	Gallons	4.81	per 1,000 Gallons
1-Inch Meter				
First	10,000	Gallons	$ 70.73	Minimum Bill
All Over	10,000	Gallons	4.81	per 1,000 Gallons
2-Inch Meter				
First	50,000	Gallons	$263.13	Minimum Bill
All Over	50,000	Gallons	4.81	per 1,000 Gallons
BULK SALES			7.84	per 1,000 Gallons

Phase 2

5/8- x 3/4-Inch Meter				
First	2,000	Gallons	$ 20.50	Minimum Bill
Next	3,000	Gallons	8.05	per 1,000 Gallons
Next	5,000	Gallons	6.73	per 1,000 Gallons
All Over	10,000	Gallons	5.32	per 1,000 Gallons
1-Inch Meter				
First	10,000	Gallons	$ 78.30	Minimum Bill
All Over	10,000	Gallons	5.32	per 1,000 Gallons
2-Inch Meter				
First	50,000	Gallons	$291.10	Minimum Bill
All Over	50,000	Gallons	5.32	per 1,000 Gallons
BULK SALES			8.68	per 1,000 Gallons

ATTACHMENT B
STAFF REPORT, CASE NO. 2013-00350
GARRISON-QUINCY-KY-O-HEIGHTS WATER DISTRICT
ENGINEERING DIVISION'S
RECOMMENDED AVERAGE SERVICE LIVES

Historically, the Commission has relied on the National Association of Regulatory Utility Commissioners Study of Depreciation Practices for Small Water Utilities ("NARUC Study"), dated August 15, 1979, and the O&M Guide for the Support of Rural Water-Wastewater Systems by Commission on Rural Water, Chicago, Illinois, 1974 ("O&M Guide"), to evaluate the reasonableness of a utility's depreciation practices. This study outlines expected service life ranges for various asset groups designed, installed, and maintained in accordance with good water works practices. Typically, an adjustment is made when the Commission finds that a utility is proposing to use a service life that falls outside of this range while service lives falling within these ranges are generally accepted.

In the following table, Engineering staff has identified the account classifications for which the utility's current service lives are not consistent with the service lives contained in the NARUC Study and the O&M Guide. The table shows the utility's current and Engineering staff's recommendation for the estimated service lives based on a review of information contained in the record of this case.

Water Asset Classification	**Current**	**Staff's Recommendation**	**NARUC Study**
Pump House	50	37.5	35-40
Ford F150, Chevy Truck	10	7	7
Telemetry equipment	20	10	10
DLXI Locator	10	17.5	15-20
Concrete Backwash Pit [1](Wells, Springs & Reservoirs)	45	37.5	35-40
Wells & Springs (Wells, Springs & Reservoirs)	45	30	25-35

Sewer Asset Classification	**Current**	**Staff's Recommendation**	**O&M Guide**
Sewer Plant	50	25	20-30

The utility appears to be utilizing service lives outside the range recommended by NARUC and the O&M Guide. Absent any specific and verifiable evidence supporting alternative service lives, Engineering staff recommends using the service lives identified above which are within the range found reasonable in the NARUC Study and the O&M Guide.

[1] Per phone conversation with utility manager, John Pierce, on 12/20/13.

Prepared December 20, 2013:

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