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PUBLIC SERVICE
COMMISSION

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

APPLICATION OF MURRAY WATER)	
DISTRICT #2 FOR AN ORDER APPROVING A)	CASE NO.
TRANSFER OF OWNERSHIP AND CONTROL)	2019-00413
TO THE CITY OF MURRAY)	

NOTICE OF FILING

COMES now CITY OF MURRAY, KENTUCKY and WATER DISTRICT #2, by and through counsel and hereby gives Notice of Filing of their joint response to Commission Staff's First Request For Information, which is attached hereto and incorporated by reference as if fully stated herein and marked EXHIBIT "A".

Respectfully Submitted,


WARREN K. HOPKINS

Attorney at Law
405 Maple Street, Suite B
Murray, KY 42071

Telephone: (270) 759-9504

Facsimile: (270) 759-9821

CERTIFICATE OF SERVICE

I, the undersigned, hereby certify that on the 30th day of JANUARY, 2020, a true and correct copy of the foregoing Notice was mailed, with proper postage affixed, to the Public Service Commission, 211 Sower Blvd., Frankfort, KY 40601 and a copy to all parties.


WARREN K. HOPKINS,
Attorney at Law

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF MURRAY WATER DISTRICT #2)	
FOR AN ORDER APPROVING A TRANSFER OF)	CASE NO.
OWNERSHIP AND CONTROL TO THE CITY OF)	2019-00413
MURRAY)	

COMMISSION STAFF'S INITIAL REQUEST FOR INFORMATION
TO MURRAY WATER DISTRICT #2 AND THE CITY OF MURRAY

Murray Water District #2 (Murray District #2) and the city of Murray, Kentucky (Murray), collectively (Joint Applicants), pursuant to 807 KAR 5:001, are to file with the Commission the original and six copies in paper medium of the following information, with a copy to all parties of record. The information requested herein is due on or before December 20, 2019. Responses to requests for information in paper medium shall be appropriately bound, tabbed, and indexed.

Each response shall include the name of the witness responsible for responding to the questions related to the information provided. Each response shall be answered under oath or, for representatives of a public or private corporation or a partnership or association or a governmental agency, be accompanied by a signed certification of the preparer or person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

Joint Applicants shall make timely amendments to any prior response if the Joint Applicants obtain information which indicates that the response was incorrect when made

or, though correct when made, is now incorrect in any material respect. For any request to which Joint Applicants fail or refuse to furnish all or part of the requested information, Joint Applicants shall provide a written explanation of the specific grounds for its failure to completely and precisely respond.

Careful attention shall be given to copied material to ensure that it is legible. When the requested information has been previously provided in this proceeding in the requested format, reference may be made to the specific location of that information in responding to this request. When applicable, the requested information shall be separately provided for total company operations and jurisdictional operations. When filing a paper containing personal information, Joint Applicants shall, in accordance with 807 KAR 5:001, Section 4(10), encrypt or redact the paper so that personal information cannot be read.

1. Exhibit 12 of the application is a letter to all customers of Murray District #2 dated June 13, 2019.

a. State whether the letter was mailed to each customer of Murray District #2.

b. Provide a copy of all written responses received to the June 13, 2019 letter.

c. Provide a description of any non-written responses to the letter.

2. KRS 278.020(6) requires the Commission to find that the person acquiring a utility that is subject to its jurisdiction possesses the financial, technical, and managerial abilities to provide reasonable service. At page 3, paragraph 13, Joint Applicants state that "The Commission should approve the transfer by WD #2 pursuant to

KRS 278.020(4). Murray has the financial, technical, and managerial abilities to continue to provide reasonable service following the Proposed Transaction.”

a. Describe in detail Murray’s technical ability and resources to manage and operate the Murray District #2’s water distribution system.

b. Identify the Murray employees who will manage and operate Murray District #2’s water system and describe each employee’s qualifications to operate and manage a water distribution system.

c. Describe Murray’s financial ability and resources to manage and operate Murray District #2’s water distribution system, including, but not limited to, available funds, lines of credit, loans, grants, or other financial support.

d. Describe in detail Murray’s management ability and resources to manage and operate Murray District #2’s water distribution system.

3. KRS 278.020(7) states that, in order to approve the transfer, the Commission must find that the proposed transaction “is to be made in accordance with law, for a proper purpose and is consistent with the public interest.” Explain in detail how the proposed transaction to transfer Murray District #2’s water distribution system to Murray is in accordance with the law, for a proper purpose, and benefits the public.

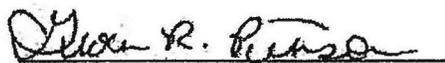
4. Provide the proposed journal entry that Murray will use to record the transfer.

5. Provide a copy of Murray’s balance sheet, income statement, and statement of retained earnings for the fiscal year ending June 30, 2019.

6. Describe the internal standards and policies of Murray regarding service reliability and quality of its water utility operations.

7. Provide all of Murray's written standards or policies related to service quality and reliability of water utility operations.

8. Provide in table format an analysis of the number and type of consumer complaints that Murray received during the period from 2013 to 2018 and how such complaints were resolved.



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

DATED DEC 12 2019

cc: Parties of Record

Case No. 2019-00413

Murray #2 Water District
1 New Providence Road
Murray, KY 42071

Honorable Warren K Hopkins
Attorney at Law
Hopkins & Associates
Maple Street, Suite B
Murray, KENTUCKY 42071

Shirley Futrell
Murray #2 Water District
New Providence Road
Murray, KY 42071

MURRAY WATER DISTRICT #2

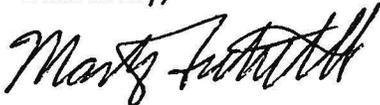
201 New Providence Road, Murray, KY 42071

270-293-2828

Response to Item #1 from the PSC Initial Request for Information:

- 1.a. The letter was mailed to each customer of record in Water District #2.
- 1.b. No written responses were received from the letter mailed on June 13, 2019.
- 1.c. One telephone inquiry was received by Marty Futrell, WD #2 Chairman from a female customer asking if the City of Murray would accept Automatic Bank Payments once they took over the system. Mr. Futrell told her that they would. No other responses or inquiries were received.

Sincerely,



Marty Futrell, Chairman

RESPONSE TO ITEM # 2 FROM PSC REQUEST FOR INFO, CASE #2019-00413

2.a The Murray Water System serves the City of Murray, former Water District #1, Water District #2, former Water District #3, Dexter-Almo Water district and 641 South Water District. We provide maintenance service to Water District #2 based on the cost of repair service. Murray has the equipment, parts and trained personnel to provide these services...Our field operations division has four 3 to 4-man service crews to respond to maintenance or emergency service situations. We have a certified operator on-call 24/7. Our water treatment plant is rated for 7.0 MGD, and on average we treat and pump around 3.5 MGD. The City of Murray Water System has an elevated storage capacity of 2.925 million gallons of potable water and 2.0 million gallons of treated potable water before high service pumping. The City of Murray has more than the minimum storage volume required by Water District #2 – 121 South, 41,355 gallons, available every day to provide water to that system. We have 9,250 water customers on the City system, so adding another 300 customers from WD #2 will not tax our service (these customers are already customers of our water system through the whole sale Water District). There will be an initial setup of direct billing for these customers, but WD #2 will provide us with all the pertinent information to do so.

2.b Our Field Operations Division is managed by Jaimey Erwin, Class III Water Distribution Operator. Our two main water distribution crews are led by Jeffrey Kirks, Class IV Water Distribution Operator and Monte Stalls, Class IV Water Distribution Operator. Our Chief Inspector and Line Locator, Eric Knott, is also a Class III Water Distribution Operator. In addition, we have (9) certified operators in water distribution ranging from Class I to Class III.

2.c For the fiscal year ended June 30, 2019, the net position of all City of Murray activities was \$53,861,829. In the General Fund, revenues and other financing sources exceeded expenditures and other uses by \$1,135,446, increasing the fund balance to \$7,791,138 as shown in the Statement of Revenues, Expenditures, and Changes in Fund Balances Governmental Funds, page 13 of the City of Murray Audited Financial Statements. All four business-type activities (Water and Sewer, Natural Gas, Sanitation, and Stormwater Utility) had a combined, positive net income totaling \$4,955,196 as shown in the Statement of Revenues, Expenditures, and Changes in Fund Balances Proprietary Funds page 16. The Water and Sewer System's total operating revenues were \$11,284,599. When compared to the total operating expenses of \$6,348,539, an operating income of \$4,936,060 existed. The change in net position was an increase of \$4,336,555 when non-operating expenses of \$494,505 and transfers to other funds of \$105,000 are considered. As of June 30, 2019, the Murray Water and Sewer System had Utility Plant in Service of \$116,134,195 and accumulated depreciation of \$33,669,070, for a net Utility Plant in Service of \$82,465,125. Total assets of \$99,977,679 and total liabilities of \$64,214,479, when recognized with deferred outflows (\$1,179,611) and inflows (\$676,708) related to CERS pensions and OPEB, led to total net position of the Murray Water and Sewer System of \$36,266,103.

As of June 30, 2019, the Murray Water and Sewer System had outstanding long-term debt of \$58,498,269. In October 2019, \$410,000 of that debt, payable to Kentucky Area Development

District, was paid off before maturity. The remaining debt is financed through the Kentucky Infrastructure Authority in the form of two Revolving Fund A Loans, both for the sewer system operations, most notably the new Murray Wastewater Treatment Facility.

2.d The Murray Water System is part of the City's Public Works & Utilities Department headed up by Tom Kutcher, MS Environmental Engineering, Professional Engineer in Ohio, Class IV-A Water Treatment Operator, Class IV Wastewater Treatment Operator, with 47-years' experience in Public Utilities Operation, Maintenance and Management. The Department's annual budget is \$23 million dollars with a total staff of 60. Our Water Treatment Plant staff is led by Paul Wood, a Certified Utility Manager (KRWA) and a Class IV-A certified treatment operator, and he has two other Class IV-A certified operators on his staff. Our Field Operations division leadership staff were described in 2.b.

**RESPONSE TO ITEM #3 FROM THE PSC'S REQUEST FOR INFORMATION TO
MURRAY WATER DISTRICT #2 AND THE CITY OF MURRAY, CASE #2019-00413**

In order to approve the transfer of Water District #2 to the City of Murray it must be proven that the transfer is to be made in accordance with law, for a proper purpose and benefits the public. The City of Murray operates as a Mayor-Council form of government under KRS 83A.130 and is classified as a Home Rule class of City. KRS 106.010 allows cities of the home rule class to acquire and operate waterworks.

The City of Murray has the financial, technical and managerial abilities to provide the needed services to the customers of WD #2 as described in the response to Item #2. The provision of water utility service is a public service carried out by the City of Murray both within the City limits and in the surrounding area. The City already provides maintenance service to the District and has committed to the District's required storage capabilities.

The customers of the District will benefit from the transfer by having full-time staff available to serve the customers, improved financial and record-keeping systems in place and sufficient revenues to respond to any potential emergencies.

The Water District only has a small amount of cash on hand and no reserves to deal with any emergencies.

RESPONSE TO ITEM # 4 FROM PSC REQUEST FOR INFO, CASE #2019-00413

4. At the time of formal acquisition and the City has received authorization from the Public Service Commission to acquire all properties and assets transferred from the Murray #2 Water District Board of Commissioners, the Director of Finance for the City of Murray will collaborate with the Water District #2 auditors or accountants to record the most current financial data in the proposed journal entry that may include, but not limited to the following:

Cash-Water District Checking

Land and Land Rights

Plant Unclassified

Miscellaneous Expense (if any)

 Accounts Payable

 Other Contribution in Aid of Construction

 Miscellaneous Revenue (if any)

Entries will also be recorded, if necessary, to accrue any outstanding payables or receivables that may exist at the time of acquisition that have not yet been recorded on the WD #2 ledgers.

CITY OF MURRAY, KENTUCKY
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
PROPRIETARY FUNDS
For The Year Ended June 30, 2019

	Business-Type Activities					Governmental Activities
	Water and Sewer	Gas	Sanitation	Stormwater	Totals	Internal Service
Operating Revenues						
Charges for services	\$ 10,782,505	\$ 8,900,593	\$ 3,446,674	\$ 240,730	\$ 23,370,502	\$ -
Interfund service provided					-	584,905
Tap-on fees	132,515	120,511			253,026	
Miscellaneous revenues	369,579	70,913	37,067		477,559	
Contributions to medical insurance fund					-	1,559,452
Total operating revenues	<u>11,284,599</u>	<u>9,092,017</u>	<u>3,483,741</u>	<u>240,730</u>	<u>24,101,087</u>	<u>2,144,357</u>
Operating Expenses						
Water plant expenses	744,029				744,029	
Sewer plant expenses	1,368,023				1,368,023	
Water and sewer field operations	1,269,576				1,269,576	
Gas purchased		5,532,219			5,532,219	
Engineering operations	172,568				172,568	
General office operations	681,407				681,407	
Administration expenses	560,701				560,701	446,859
Other operating expenses					-	629,569
Depreciation	1,552,235	430,203	48,680	61,810	2,092,928	15,305
Gas plant expenses		2,828,767			2,828,767	
Transfer station and landfill expenses			3,161,016		3,161,016	
Stormwater expenses				18,934	18,934	
Medical claims paid					-	1,650,040
Total operating expenses	<u>6,348,539</u>	<u>8,791,189</u>	<u>3,209,696</u>	<u>80,744</u>	<u>18,430,168</u>	<u>2,741,773</u>
Operating income (loss)	<u>4,936,060</u>	<u>300,828</u>	<u>274,045</u>	<u>159,986</u>	<u>5,670,919</u>	<u>(597,416)</u>
Non-operating Revenues (Expenses)						
Interest and dividend income	177,766	76,792	29,450	1,767	285,775	16,886
Interest expense	(672,271)	(11,672)			(683,943)	
Gain (loss) on sale of assets		(83)	(2,472)		(2,555)	
Total non-operating revenues (expenses)	<u>(494,505)</u>	<u>65,037</u>	<u>26,978</u>	<u>1,767</u>	<u>(400,723)</u>	<u>16,886</u>
Income before transfers	<u>4,441,555</u>	<u>365,865</u>	<u>301,023</u>	<u>161,753</u>	<u>5,270,196</u>	<u>(580,530)</u>
Operating Transfers						
From (to) other funds	(105,000)	(105,000)	(105,000)		(315,000)	
Change in net position	<u>4,336,555</u>	<u>260,865</u>	<u>196,023</u>	<u>161,753</u>	<u>4,955,196</u>	<u>(580,530)</u>
Net position-beginning of period	31,929,548	11,016,179	1,986,086	1,709,494	46,641,307	312,848
Net position-end of period	<u>\$ 36,266,103</u>	<u>\$ 11,277,044</u>	<u>\$ 2,182,109</u>	<u>\$ 1,871,247</u>	<u>\$ 51,596,503</u>	<u>\$ (267,682)</u>

The accompanying notes are an integral part of these financial statements.

CITY OF MURRAY, KENTUCKY
STATEMENT OF NET POSITION
PROPRIETARY FUNDS
June 30, 2019

	Business-Type Activities					Governmental
	Water and Sewer	Gas	Sanitation	Stormwater	Totals	Internal Service
Assets						
Cash and cash equivalents	\$ 10,434,750	\$ 4,990,800	\$ 1,617,013	\$ 141,887	\$ 17,184,450	\$ -
Receivables (net of allowances)						
Customers	651,589	361,973	261,870	15,535	1,290,967	
Miscellaneous	484	2,907	285		3,676	27,442
Due from other funds		165,813	12,541		178,354	
Materials and supplies, at average cost	244,722	142,156			386,878	50,266
Total current assets	<u>11,331,545</u>	<u>5,663,649</u>	<u>1,891,709</u>	<u>157,422</u>	<u>19,044,325</u>	<u>77,708</u>
Noncurrent assets						
Construction in progress	247,442		135,688		383,130	
Utility plant in service	116,134,195	10,349,230			126,483,425	
Land	443,847	924,980	54,524		1,423,351	
Buildings	871,622	2,491,269	404,121		3,767,012	225,000
Machinery and equipment	811,877	581,566	1,567,943		2,961,386	246,815
Vehicles	1,171,096	414,140		35,116	1,620,352	
Other equipment	1,606,987	1,625,157	56,421	38,809	3,327,374	
Drainage improvement				2,250,097	2,250,097	
Accumulated depreciation	(36,624,547)	(7,097,682)	(1,655,022)	(488,425)	(45,865,676)	(351,056)
Restricted assets	3,983,615	395,318	354,852		4,733,785	503,050
Total noncurrent assets	<u>88,646,134</u>	<u>9,683,978</u>	<u>918,527</u>	<u>1,835,597</u>	<u>101,084,236</u>	<u>623,809</u>
Total assets	<u>99,977,679</u>	<u>15,347,627</u>	<u>2,810,236</u>	<u>1,993,019</u>	<u>120,128,561</u>	<u>701,517</u>
Deferred Outflows of Resources						
Deferred outflows related to pensions	876,417	682,014	73,315	24,359	1,656,105	70,057
Deferred outflows related to OPEB	303,194	235,942	25,363	8,427	572,926	24,236
Total deferred outflows	<u>1,179,611</u>	<u>917,956</u>	<u>98,678</u>	<u>32,786</u>	<u>2,229,031</u>	<u>94,293</u>
Liabilities						
Current Liabilities						
Accounts payable	670,595	406,130	246,184	8,232	1,331,141	210,181
Accrued salaries and wages	13,190	6,758	375	233	20,556	31,058
Accrued compensated absences	147,796	91,338	27,206	2,722	269,062	
Accrued liabilities	32,041	24,731	28,637	2,348	87,757	247,263
Due to other funds	14,550				14,550	169,214
Current portion of bonds/notes payable	2,895,150				2,895,150	
Customer deposits	297,420	385,020			682,440	
Accrued interest						
Bonds	62,564				62,564	
Customer deposits	78,767	124,558			203,325	
Total current liabilities	<u>4,212,073</u>	<u>1,038,535</u>	<u>302,402</u>	<u>13,535</u>	<u>5,566,545</u>	<u>657,716</u>
Noncurrent liabilities						
Net pension liability	3,405,946	2,650,657	284,796	94,634	6,436,033	272,297
Net OPEB liability	992,879	772,703	83,022	27,587	1,876,191	79,378
Notes payable	55,603,581				55,603,581	
Total noncurrent liabilities	<u>60,002,406</u>	<u>3,423,360</u>	<u>367,818</u>	<u>122,221</u>	<u>63,915,805</u>	<u>351,675</u>
Total liabilities	<u>64,214,479</u>	<u>4,461,895</u>	<u>670,220</u>	<u>135,756</u>	<u>69,482,350</u>	<u>1,009,391</u>
Deferred Inflows of Resources						
Deferred inflows related to pensions	459,031	357,238	38,383	12,754	867,406	36,699
Deferred inflows related to OPEB	217,677	169,406	18,202	6,048	411,333	17,402
Total deferred inflows	<u>676,708</u>	<u>526,644</u>	<u>56,585</u>	<u>18,802</u>	<u>1,278,739</u>	<u>54,101</u>
Net Position						
Net investment in capital assets	26,163,788	9,288,660	563,675	1,835,597	37,851,720	120,759
Restricted for						
Employee benefit trust						503,050
Debt service	2,979,705				2,979,705	
Renewal and replacement	557,220				557,220	
Landfill post closure reserve			354,852		354,852	
Unrestricted	6,565,390	1,988,384	1,263,582	35,650	9,853,006	(891,491)
Total net position	<u>\$ 36,266,103</u>	<u>\$ 11,277,044</u>	<u>\$ 2,182,109</u>	<u>\$ 1,871,247</u>	<u>\$ 51,596,503</u>	<u>\$ (267,682)</u>

The accompanying notes are an integral part of these financial statements.

RESPONSE TO ITEM # 6 FROM PSC REQUEST FOR INFO, CASE #2019-00413

6. To maintain the quality of water from our treatment plant to the consumer tap, we try to maintain a distribution system that is clean (semi-annual flushing), biologically stable (chlorine residual around 1.0 mg/L throughout), and chemically stable (pH around 7.8 with non-aggressive water quality). Monthly we sample our system for total coliforms with 25-30 samples spread out over our entire system. In addition, the Water Districts that buy water wholesale from us also sample their systems to ensure no bacterial growth in the system. We also measure the turbidity of the water entering the distribution system to ensure it is less than 0.3 NTUs. Lastly, we monitor the turn-over in our elevated storage tanks to ensure that the water does not become stale.

RESPONSE TO ITEM # 7 FROM PSC REQUEST FOR INFO, CASE #2019-00413

7. **Murray Water System Mission Statement:**

“Our commitment is to provide our customers with a safe, clean, and reliable supply of drinking water. We want to assure our customers that we will continue to monitor, improve, and protect the water system, and deliver a high-quality product. Water is the most indispensable product in every home and we ask everyone to be conservative and help us in our efforts to protect the water source and water system.”

RESPONSE TO ITEM #8 FROM PSC REQUEST FOR INFO, CASE #2019-00413

8. Consumer Complaints Table 2013 to 2018. All paper copies, over 1,000 per year just in water distribution, plus 2,000 to 2,500 KYUG tickets annually. We just don't have the staff to go through all this. We do not have a database for these workorders at this time. In general, when customers call in with an issue or complaint, we fill out a Work Order that is given to the Field Operations Manager to assign to one of his crews or inspectors. We obtain firsthand knowledge of the situation, and then respond with a plan to correct the defect. Once Work-Orders are complete, they are reviewed by the respective Crew Leader, and then by the Field Operations Manager. The Work Order is scanned as a pdf document and filed electronically by property address. We are working toward a GIS-based work order system with electronic work orders and data tracking and mapping.

We have maintained records at our water plant for complaints for the past year for water quality issues and those reports are attached.

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 12-5-19

TYPE OF COMPLAINT: Odor

NAME: Tony Green 270.293.6919

ADDRESS: 156 Browns Grove Rd.

WATER QUALITY TESTS

PH: 7.68

ALKALINITY:

CONDUCTIVITY: 0.12

HARDNESS:

TURBIDITY: 0.054

IRON:

FREE CHLORINE: 1.36

TOTAL CHLORINE: 1.39

OUTSIDE LABORATORY TESTS

BAC-T:

OPERATOR: Paul Wood Greg Roberts

NOTES:

**Customer complained of sulfur smell coming from mainly from the shower and bathroom sink.
We could not detect anything out of the ordinary. Customer is located on a dead end line, but the
water quality was excellent**

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 12-2-19

TYPE OF COMPLAINT: Water causing itchy scalp.

NAME: Billie Burton 270.293.9018

ADDRESS: 604 Elm St

WATER QUALITY TESTS

PH: 7.68

ALKALINITY:

CONDUCTIVITY:

HARDNESS: 20.1

TURBIDITY:

IRON:

FREE CHLORINE: 1.19

TOTAL CHLORINE: 1.21

OUTSIDE LABORATORY TESTS

BAC-T:

OPERATOR: Paul Wood Shane Bennett

NOTES:

Customer believes the city water may be causing her dry, itchy scalp. She has had this problem for around three years and when she leaves town for an extended time the problem goes away. She has visited the dermatologist numerous times.

Checked pH, hardness and cl₂, found nothing out of the ordinary. Recommended she try bottled drinking water or distilled water to wash her hair as she may be sensitive to chlorine or other chemicals.

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 11-15-19

TYPE OF COMPLAINT: Odor

NAME: John Krieb H: 270.753.7667 C: 270.227.2240

ADDRESS: 1545 Mockingbird Dr.

WATER QUALITY TESTS

PH: **7.70**

ALKALINITY:

CONDUCTIVITY:

HARDNESS:

TURBIDITY:

IRON:

FREE CHLORINE: **1.41**

TOTAL CHLORINE: **1.42**

OUTSIDE LABORATORY TESTS

BAC-T: 2 on 11/26/2019

OPERATOR: **Paul Wood Greg Roberts**

NOTES:

**Customer complained of rotten egg smell when they filled water from the kitchen tap.
Found nothing out of the ordinary. Neither Greg nor I could smell anything from the tap.
Most likely a dry sink trap causing the odor.**

Took 2 BAC-T Tests on 11/26/2019 one from the kitchen sink & one from a bathroom sink. Both tests came back clear.

MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT

DATE: 11-14-19

TYPE OF COMPLAINT: Odor

NAME: Sam 270.293.5034 (Land lord lodged complaint)

ADDRESS: 1404 C Duiguid Drive

WATER QUALITY TESTS

PH: 7.70

ALKALINITY:

CONDUCTIVITY:

HARDNESS:

TURBIDITY:

IRON:

FREE CHLORINE: 1.38

TOTAL CHLORINE:

OUTSIDE LABORATORY TESTS

BAC-T:

OPERATOR: Paul Wood Shane Bennett

NOTES: Found nothing out the ordinary. Customer said they noticed it weeks ago but it cleared up and the land lord has just now called it in. I believe their issues came from the system wide flushing. (Reminder: customer has a very large pit bull in the house)

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 10-16-19

TYPE OF COMPLAINT: Discolored clothes

NAME: Dorothy Newcomb 270.205.6116

ADDRESS: 1502 Stadium View Apt. C

WATER QUALITY TESTS

OUTSIDE LABORATORY TESTS

PH:

BAC-T:

ALKALINITY:

CONDUCTIVITY:

HARDNESS:

TURBIDITY:

IRON: 0.01

FREE CHLORINE: 1.30

TOTAL CHLORINE:

OPERATOR:

NOTES: Customer complained that our water may be staining her whites. Made an appointment for 9am on 10-16-19, customer never answered the door or answered her phone. We took a sample from the house outside faucet and found nothing out of the ordinary.

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 9-19-19

TYPE OF COMPLAINT: Discolored Water

NAME: David Johnston

ADDRESS: 1503 Fleetwood Drive

WATER QUALITY TESTS

PH: 7.72

ALKALINITY:

CONDUCTIVITY: 0.12

HARDNESS:

TURBIDITY:

IRON: 0.02

FREE CHLORINE: 1.38

TOTAL CHLORINE: 1.42

OUTSIDE LABORATORY TESTS

BAC-T:

OPERATOR: Paul Wood Shane Bennett

NOTES: Customer complained of black water at all taps.

Immediately confirmed discolored water coming out of all taps, a free chlorine test showed zero chlorine. Customer informed me that they have a whole house filtration system. I asked for them to by-pass the system, tap water cleared up within minutes with a good chlorine reading. I believe the charcoal filters are deteriorating causing the discolored water. Advised customer to call his filtration provider.

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 9-11-19

TYPE OF COMPLAINT: Chemical Taste

NAME: Donna Futrell 270.752.0933

ADDRESS: 519 Shady Lane

WATER QUALITY TESTS

PH: 7.75

ALKALINITY:

CONDUCTIVITY: 0.12

HARDNESS:

TURBIDITY: 0.056

IRON:

FREE CHLORINE: 1.39

TOTAL CHLORINE:

OUTSIDE LABORATORY TESTS

BAC-T: N/A

OPERATOR: Paul Wood Shane Bennett

NOTES: Customer complained of chemical taste of the tap water, especially in the morning. We did not detect any taste problems but you could smell chlorine. Free chlorine tested low for the first ten minutes, then became normal after letting the tap run. Created a work order for Shady Lane to be flushed.

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 8- 26-19

TYPE OF COMPLAINT: Taste and Color

NAME: Ramona Anderson 270.978.2874

ADDRESS: 846 Hurt Drive

WATER QUALITY TESTS

pH: 8.17

ALKALINITY:

CONDUCTIVITY: 0.12

HARDNESS:

TURBIDITY:

IRON:

FREE CHLORINE: 1.22

TOTAL CHLORINE:

OUTSIDE LABORATORY TESTS

BAC-T:

OPERATOR: Paul Wood Shane Bennett

NOTES: Customer complained of taste and a color to the water, mainly when making tea. We did not witness any taste or color problems. Noticed the pH level is high and the water in the tanks are warmer, which exacerbates existing taste issues.

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 8-22-19

TYPE OF COMPLAINT: Air in tap water

NAME: Pat Richardson 270.293.7736

ADDRESS: 404 North 5th ST

WATER QUALITY TESTS

OUTSIDE LABORATORY TESTS

PH:

BAC-T: N/A

ALKALINITY:

CONDUCTIVITY:

HARDNESS:

TURBIDITY:

IRON:

FREE CHLORINE: 1.27

TOTAL CHLORINE: 1.47

OPERATOR: Paul Wood Shane Bennett

NOTES: Customer complained of air in the tap water. We confirmed air at kitchen sink. Checked bathroom and found no air in sink line. Customer has low pressure at sink. She told us she recently had plumbing done at the house. We checked houses upstream and downstream for air issues and found none. I believe her plumbing to be bad, likely galvanized lines, because of rust and sediment in sink aerator. Note: Visited house on 2/13/19 for similar complaint, we believed caused by a distribution leak on 4th Street.

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 8-15-19

TYPE OF COMPLAINT: White particles in kitchen sink water.

NAME: Russell Currid 270.761.6034

ADDRESS: 1501-Diuguid-Drive Apt c-14

WATER QUALITY TESTS

PH: **7.86**

ALKALINITY:

CONDUCTIVITY: **0.13**

HARDNESS: **20.1**

TURBIDITY:

IRON: **0.02**

FREE CHLORINE: **1.40**

TOTAL CHLORINE: **1.50**

OUTSIDE LABORATORY TESTS

BAC-T: N/A

OPERATOR: Paul Wood Shane Bennett

NOTES: Customer complained of unknown white particles in his tap water.

Upon investigation we found there to be air bubbles in the customer's line causing the water to look white. The air quickly dissipated after being drawn from the tap. Customer said the hot water heater has been replaced recently. Water Quality tests showed nothing out of the ordinary. I asked the customer to flush his plumbing and recommended distribution to flush the area, for good measure.

MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT

DATE: 4/30/19

TYPE OF COMPLAINT: Red ring in dog bowl and toilet.

NAME: Diana Dauberut 270.227.9493

ADDRESS: 1602 Belmont Circle

WATER QUALITY TESTS

PH: **7.90**

ALKALINITY:

CONDUCTIVITY:

HARDNESS:

TURBIDITY:

IRON: **0.04**

FREE CHLORINE: **1.24**

TOTAL CHLORINE: **1.33**

OUTSIDE LABORATORY TESTS

BAC-T:

OPERATOR: Paul Wood & Darran McClure

NOTES:

Customer has the common airborne bacteria *Serratia Marcescens*, which causes red rings.

Explained that this is not caused by our water. Gave customer an info handout on the bacteria.

I received two calls on this in one day, seems the two complaints are from friends that have been discussing it.

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 4-24-19

TYPE OF COMPLAINT: Odor

NAME: Christina Moody 270.226.2242

ADDRESS: 1121 Transit Way, Apartment 207 (Tanglewood)

WATER QUALITY TESTS

PH: 7.82

ALKALINITY:

CONDUCTIVITY:

HARDNESS:

TURBIDITY: 0.056

IRON: 0.02

FREE CHLORINE: 1.28

TOTAL CHLORINE: 1.31

OUTSIDE LABORATORY TESTS

BAC-T: N/A

OPERATOR: Paul Wood

NOTES:

Customer only smells odor in the bathroom, typically first thing in the morning. Found nothing out of the ordinary. I believe the sink drain trap is dry, causing the odor.

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 3-19-19

TYPE OF COMPLAINT: Color and Sediment

NAME: Barbara Guzman 270.227.2460

ADDRESS: 193 Sauger Lane

WATER QUALITY TESTS

PH:

ALKALINITY:

CONDUCTIVITY:

HARDNESS:

TURBIDITY:

IRON:

FREE CHLORINE:

TOTAL CHLORINE:

OUTSIDE LABORATORY TESTS

BAC-T:

OPERATOR: Paul Wood Per Phone.

NOTES: Mrs. Guzman called because of color and sediment in her water. We typically get a call from her yearly to flush, since she is on a dead end line. I made a work order for the line to be flushed. She called back the next day and said her bathroom was worse. After talking with her I found out this was only happening in one bathroom, so I advised her to call a plumber.

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 3-13-19

TYPE OF COMPLAINT: Taste, color

NAME: Blackburn Science Building CONTACT: Robin 270.227.8719 3rd floor Earth and Environmental Dept.

ADDRESS: MSU Campus

WATER QUALITY TESTS

PH: **7.72**

ALKALINITY:

CONDUCTIVITY: **0.12**

HARDNESS:

TURBIDITY: **0.067**

IRON: **0.02**

FREE CHLORINE: **1.28**

TOTAL CHLORINE: **1.28**

OUTSIDE LABORATORY TESTS

BAC-T: Absent

OPERATOR: Paul Wood & Greg Roberts

NOTES: An employee at the Science Bldg. called about their overall concern of the drinking water in the building. According to the employees the water has been turned off multiple times due to construction or repairs. They have noticed discoloration of the water and unusual taste at the water fountains after the water was restored. We did not find anything unusual in the water quality, we also took a bac-t test which tested absent. I believe the problems they are having are due to the recent repairs, I do have concerns with the buildings upkeep though. Multiple water fountains are out of order and the plumbing looks to be in disrepair along with the backflow devices not being inspected yearly. I have inquired with Microbac to price a test for chemicals commonly used in industrial HVAC, since the backflow device may have failed.

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 3-6-19

TYPE OF COMPLAINT: Discolored water "brown"

NAME: Boone's Laundry

ADDRESS: 605 Main St.

WATER QUALITY TESTS

PH:

ALKALINITY:

CONDUCTIVITY:

HARDNESS:

TURBIDITY:

IRON: **0.12**

FREE CHLORINE: **1.36**

TOTAL CHLORINE:

OUTSIDE LABORATORY TESTS

BAC-T:

OPERATOR: Paul Wood, Greg Roberts, Monte Stalls and Darren Howard

NOTES: Customer complained of brown water. We arrived 15 minutes after the complaint call and was taken to a bathroom where the customer said it was most prevalent. The water showed no signs of discoloration or odor, free chlorine was normal. Searched surrounding streets for a possible cause; hydrants being used, construction, etc., found no problems. Told customer to please call if they have any more issues.

**MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT**

DATE: 2-13-19

TYPE OF COMPLAINT: Low pressure and discoloration

NAME: Pat Richardson

ADDRESS: 404-N 5th St.

WATER QUALITY TESTS

PH:

ALKALINITY:

CONDUCTIVITY: 0.13

HARDNESS:

TURBIDITY:

IRON: 0.09

FREE CHLORINE: 1.20

TOTAL CHLORINE: 1.24

OUTSIDE LABORATORY TESTS

BAC-T:

OPERATOR: Paul Wood & Darran McClure

NOTES: Customer complained of low pressure and yellow color to the water.

Confirmed low pressure and discoloration, caused by water main repair on 4th St.

Low pressure at kitchen sink caused by aerator stoppage.

Recommended for customer to run their sinks until clear and to call back if trouble persists for longer than 24 hours.

MURRAY WATER SYSTEM
WATER QUALITY COMPLAINT

DATE: 1-18-19

TYPE OF COMPLAINT: Hard Water

NAME: Elizabeth Roark 859.351.4885

ADDRESS: 2114 South West Drive

WATER QUALITY TESTS

PH:

ALKALINITY:

CONDUCTIVITY:

HARDNESS:

TURBIDITY:

IRON:

FREE CHLORINE:

TOTAL CHLORINE:

OUTSIDE LABORATORY TESTS

BAC-T:

OPERATOR: Paul Wood

NOTES: Customer called to ask if we have hard water issues.

She said her dishwasher was leaving an etching on her dishes.

I told her we don't typically have any complaints of hard water and that it may be her soap or rinse aid.

I offered to make a visit and sample her water, she politely refused.