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ADMITTED IN KY AND WV

March 22, 2021

Public Service Commission
P.O. Box 615
Frankfort, KY 40602

RE: Martin County Water District
PSC Case No. 2020-00154

To Whom It May Concern:

Enclosed please find Martin County Water District's Notice of Filing the information packet for the March 23, 2021 Board meeting.

Thank you for your attention to this matter.

Very truly yours,

BRIAN CUMBO

BC/ld

Enclosure

cc: Martin County Water District
Hon. Mary Varson Cromer

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION


In the Matter of:

ELECTRONIC MARTIN COUNTY WATER)
DISTRICT MANAGEMENT AND OPERATION)
MONITORING PURSUANT TO KRS 278.250)

CASE NO. 2020-00154

NOTICE OF FILING

Comes the Martin County Water District, by counsel, and hereby gives Notice of Filing of the attached information packet for the Martin District monthly Board meeting scheduled for March 23, 2021.


BRIAN CUMBO
COUNSEL FOR MARTIN COUNTY
WATER DISTRICT
P.O. BOX 1844
INEZ, KY 41224
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CERTIFICATE OF SERVICE

This will certify that a true and correct copy of the foregoing was emailed on this the 22 day of March, 2021, to the following:

Public Service Commission
ATTN: Nancy Vinsel
P.O. Box 615
Frankfort, KY 40602
nancy.vinsel@ky.gov

Hon. Mary Varson Cromer
Appalachian Citizens' Law Center, Inc.
317 Main Street
Whitesburg, KY 41858
mary@appalachianlawcenter.org


BRIAN CUMBO

Martin County Water District
387 E. Main St.

Phone (606) 298-3885 Inez, Kentucky 41224
Special Meeting, Tuesday, March 23, 2021 – 6:00 p.m.
Martin County Government Center (2nd Floor)
Online Zoom Platform
Will Be Streamed on Facebook Live

- 1) Call the meeting to order

- 2) Review and Consideration to Approve Minutes

- 3) Review and Consideration of Financial Reports
 - A. Review and Consideration to Approve Treasurer's Report
 - B. Review and Consideration to Approve Other Financial's
 - C. Discussion with Auditor

- 4) Review and Consideration to Approve Bills

- 5) Operations
 - A. Alliance Operations Report
 - B. Water Loss Report

- 6) Capital Projects Report
 - A. Project Updates

- 7) Other New Business
 - A. MCCC Discussion
 - B. Boil Water Advisories

- 8) Q/A with Customers via Facebook

- 9) Adjourn

Notice is hereby given that, subject to a motion duly made and adopted, the Board of Directors may hold an Executive Session subject to the laws of Kentucky.

**Martin County Water District
Special Meeting of the Board of Directors
February 23, 2021 Meeting Minutes**

Presiding: James Kerr, Chairman
Present: Directors: Greg Crum, BJ Slone, and John Hensley
Staff: Brian Cumbo (Attorney), Craig Miller (GM), Cassandra Moore
Guests: N/A

The Regular Meeting of the Martin County Water District was held on February 23, 2021 via Zoom in Inez, Kentucky 41224. Mr. Kerr called the meeting to order at 6:01 p.m.

Mr. Kerr called for review of the January 26, 2021, Special Board Meeting. Having no questions or further discussions, Mr. Slone motioned to accept the January 26, 2021 Special Board Meeting minutes. Mr. Crum seconded. All ayes. Motion carried.

Mr. Kerr requested discussion on the review and consideration of the Financial Reports. Mr. Miller detailed each report as submitted. After further discussion, Mr. Hensley motioned to approve the Treasurer's report submitted. Mr. Slone seconded. All ayes. Motion carried. Other Financials were presented by Mr. Miller. After further discussion, Mr. Slone motioned to approve, Mr. Crum seconded. All ayes. Motion carried. Mr. Miller gave a detailed report on the year end repair and chemical cap numbers.

Mr. Kerr called for review and consideration to Approve Bills. After review and no further discussion, Mr. Hensley motioned to approve the list of bills as presented. Mr. Slone seconded. All ayes. Motion carried.

Mr. Kerr called for review of the Operations Report. Mr. Miller provided the Operations report. Recently, during meter reading week, one of our employees noticed water accumulating on the ground. The leak was located and repaired. The master meter associated with that sector of the distribution system slowed by 80 gallons a minute. That equals approximately 3.5 million gallons a month.

Mr. Miller presented an update on the water loss report.

Mr. Miller presented an update on the GIS Implementation System. As the process moves forward, all water meters, valves, grinder tanks, boosters, lift stations, etc. will be located using satellite technology. The water and sanitation districts will continue to become modern, well run utilities.

Mr. Kerr presented an update on capital projects. Lovely project has been stalled at the moment, but hoping to continue on track.

Mr. Kerr inquired if there was any Other New Business to discuss. Mr. Miller discussed the Water District's compliance letter with the American Water Infrastructure Act of 2018

(AWIA). The first deadline for compliance for the Water District is June 30, 2021. Alliance is ahead of schedule and see no obstacles that will keep them from full compliance with the AWIA.

Having no further items for discussion, Mr. Kerr requested a motion to adjourn. Mr. Slone motioned to adjourn the meeting. Mr. Crum seconded. All ayes. Motion carried. Meeting adjourned at 6:33 p.m.

Minutes approved this _____ day of _____, 2021.

James Kerr, Chairman

Cassandra Moore, District Clerk

Martin County Water District
Balance Sheet
February 28, 2021

2/28/2021

ASSETS

CURRENT ASSETS

Checking Account - Operations	\$94,845.59
Revenue Fund-EFT	22,239.58
Cash on Hand	900.00
Total Cash	117,985.17
Accounts Receivable	363,041.29
Allowance for Doubtful Accts	(93,026.05)
Unbilled Accounts Receivable	62,058.00
Inventory	4,566.18
Prepaid Expenses	8,874.44
Total Current Assets	463,499.03

PROPERTY, PLANT & EQUIPMENT

Land	214,713.83
Water Supply & Distribution System	27,316,475.43
Buildings	500,263.89
Equipment & Furniture	6,398,523.47
Vehicles	307,473.65
Construction Work in Progress	387,311.92
Less: Accumulated Depreciation	(17,272,379.38)
Net Property, Plant & Equipment	17,852,382.81

RESTRICTED CASH

Security Deposits	168,941.25
Grant Fund	93.38
Sinking Fund - RD	4,996.41
Regions Sinking Fund	28,197.68
KIA Sinking Fund	10,893.74
KACO Sinking Fund	11,132.47
Debt Service Surcharge Fund	1,059.35
Management Infrastructure Surcharge Fund	296.70
Depreciation Fund	1,021.80
Accrued Interest Receivable	2.00
Total Restricted Cash	226,634.78

OTHER ASSETS

Deferred Outflows of Resources Related to Pensions	286,346.00
Total Other Assets	286,346.00

Total Assets	\$18,828,862.62
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Martin County Water District
Balance Sheet
February 28, 2021

2/28/2021

LIABILITIES AND DISTRICT'S EQUITY

CURRENT LIABILITIES

Accounts Payable	\$1,132,391.02
Sales Tax Payable	1,261.11
School Tax Payable	3,799.80
Long Term Debt-Current	131,281.02
Accrued Interest Payable	6,783.63
Customer Deposits	71,462.67
<i>Total Current Liabilities</i>	1,346,979.25

LONG-TERM DEBT

Notes Payable - KIA	388,594.68
Lease Payable - KACO	71,221.96
Bonds Payable - 2015 E Current Refunding	1,705,000.00
Bonds Premium-2015E	22,363.00
A/Amort Bond Premium-2015E	(4,371.64)
Less: Current Portion of L-Term Debt	(131,281.02)
Net Pension Liability	1,739,483.00
Other Inflow Resources-Pension	93,003.00
<i>Total Long-Term Debt</i>	3,884,012.98

Total Liabilities

5,230,992.23

DISTRICT'S EQUITY

Retained Earnings	13,671,117.77
YTD Net Income	(73,247.38)
<i>Total District's Equity</i>	13,597,870.39

Total Liabilities and District's Equity

\$18,828,862.62

Martin County Water District
Statements of Revenues and Expenses
For the Two Months Ending February 28, 2021
Actual vs Budget

<u>February</u>			<u>YTD</u>		<u>Annual Budget</u>
<u>Actual</u>	<u>Budget</u>		<u>Actual</u>	<u>Budget</u>	
		Operating Revenues			
\$146,689	\$168,076	Water Sales-Residential	\$294,013	\$339,534	\$2,010,893
22,268	26,748	Water Sales-Commercial	44,073	53,496	320,978
5,793	7,792	Water Sales-Public Authorities	11,321	15,584	93,504
0	4	Bulk Water Sales	0	8	50
1,000	2,194	Connection Fees - Tap	2,000	4,388	26,333
5,759	1,491	Late Charge Fees	10,683	2,982	17,888
1,778	2,049	Reconnect/Meter Sets/Other Fees	6,206	4,098	24,585
8,967	0	Debt Service Surcharge	18,017	0	0
16,088	16,038	Management Infrastructure Surcharge	32,332	32,076	192,456
0	436	Miscellaneous Income	10	872	5,233
208,342	224,828	Total Operating Revenues	418,655	453,038	2,691,920
		Operating Expenses			
0	833	Water Purchased	0	1,666	10,000
168,507	168,507	Management & Operations Contract	337,013	337,014	2,022,079
23,647	21,667	Utilities	50,331	43,334	260,000
1,176	2,500	Insurance	2,521	5,000	30,000
1,223	833	Repairs & Maintenance	1,312	1,666	10,000
430	833	Outside Services	549	1,666	10,000
500	625	Legal Expenses	1,413	1,250	7,500
0	0	Audit	0	0	7,800
4,583	4,583	Bad Debts	9,166	9,166	55,000
450	121	Bond Trustee Fees	450	242	1,450
0	154	Dues	0	308	1,850
108	271	Office Expense	208	542	3,250
824	750	Rent Expense	1,647	1,500	9,000
0	667	Regulatory Assess Fees	0	1,334	8,000
33	125	Miscellaneous Expense	33	250	1,500
201,481	202,469	Total Operating Expenses	404,643	404,938	2,437,429
6,861	22,359	Net Income B/4 Other (Inc) & Exp	14,012	48,100	254,491
		Other Income (Expenses)			
0	0	Capital Contributions	56,270	0	0
10	40	Interest Income	20	80	483
(6,996)	(6,705)	Interest Expense	(13,676)	(13,410)	(80,458)
63	63	Amortization	126	126	753
(65,000)	(65,000)	Depreciation	(130,000)	(130,000)	(780,000)
(71,923)	(71,602)	Total Other Income (Expenses)	(87,260)	(143,204)	(859,222)
(\$65,062)	(\$49,243)	Net Income(Loss)	(\$73,248)	(\$95,104)	(\$604,731)

**Martin County Water District
Inez, KY**

Treasury Report

Billing Charges For the Month of:	Feb-21	
Water Revenue		\$ 146,638.66
Water Revenue-Commercial		22,268.23
Water Revenue-Commercial Exempt		5,793.04
Late Charges		5,758.79
Sales Taxes		1,336.15
Debt Service Surcharge		8,967.00
School Tax		5,241.65
Management Infrastructure Surcharge		16,088.19
Returned Check		2,412.89
Connection Fees		1,000.00
Other Miscellaneous Fees		1,777.90
Deposits Applied		(3,252.33)
Refund Checks Paid		671.43
Total Billing Charges		\$ 214,701.60
		<hr/>
Gallons Billed		22,118,600
		<hr/>
Customers Billed		3,623

Accounts Receivable	Feb-21	
Beginning Balance		334,127.58
Billing Charges		214,701.60
Bad Debt (Write Offs) Recoveries		140.11
Accounts Receivable Collections		(178,813.93)
End of Month Accounts Receivable		370,155.36

Operations Account		
Beginning Balance	\$	111,736.86
Deposits		
Accounts Receivable Collections		178,813.93
Transfers from Other District Accts		65,000.00
Total Deposits		243,813.93
Disbursements:		
Checks Written		(188,228.17)
Transfers to Other District Accts		(45,461.60)
Auto Drafted Utilities		(27,015.43)
End of Month Balance	\$	94,845.59

**Martin County Water District
Inez, KY
Treasury Report
Summary of Cash & Investments
February 28, 2021**

Bank Account	Beginning Balance	Deposits	Interest Earned, Net of Fees	Payments	Ending Balance
Operations Account	\$ 111,736.86	269,165.80	-	(286,057.07)	\$ 94,845.59
Revenue EFT Account	28,244.19	61,447.79	-	(67,452.40)	22,239.58
Cash on Hand	900.00	-	-	-	900.00
Total Unrestricted Cash	140,881.05	330,613.59	-	(353,509.47)	117,985.17
Restricted Cash					
Security Deposits	167,865.34	1,170.00	6.96	(101.05)	168,941.25
ARC Grant	56,363.40	-	-	(56,270.02)	93.38
Rockhouse Project	5,090.06	10,800.00	-	(10,893.65)	4,996.41
Regions Bank-KY 2015E Martin County	111,643.24	10,893.65	2.67	(94,341.88)	28,197.68
KIA Bond & Interest	10,779.66	5,800.00	0.20	(5,686.12)	10,893.74
KY Assoc of Counties Leasing Trust	10,296.96	1,200.00	0.22	(364.71)	11,132.47
Debt Service Surcharge	9,045.29	9,480.36	0.15	(17,466.45)	1,059.35
Management Infrastructure Surcharge	13,798.46	17,011.24	0.27	(30,513.27)	296.70
Depreciation Reserve	1,021.78	-	0.02	-	1,021.80
Total Restricted Cash	385,904.19	56,355.25	10.49	(215,637.15)	226,632.78
Total Cash & Investments	\$ 526,785.24	386,968.84	10.49	(569,146.62)	\$ 344,617.95

NOTE: Revenue EFT Account is being transitioned to re-direct deposits into Operations Account.

**Martin County Water District
Billing Summary**

Date	Billed		Gallons (000'S)	Billed # of Customers	Payments Received
	Revenue	YTD Total			
Feb-21	251,935	435,525	22,119	3,623	178,814
Jan-21	183,589	183,589	13,253	3,497	325,483
Dec-20	176,266	2,424,068	12,219	3,501	201,732
Nov-20	183,638	2,247,802	13,274	3,501	178,105
Oct-20	183,281	2,064,164	13,297	3,496	213,095
Sep-20	181,546	1,880,884	12,276	3,490	188,022
Aug-20	182,051	1,699,338	13,603	3,481	237,043
Jul-20	223,267	1,517,287	18,702	3,463	207,448
Jun-20	372,931	1,294,020	27,388	3,424	195,535
May-20	194,835	921,089	14,811	3,390	221,999
Apr-20	178,101	726,254	12,528	3,370	199,144
Mar-20	170,339	548,153	11,629	3,386	193,963
Feb-20	187,025	377,814	12,846	3,369	207,246

Notes:

- 1) June 2020 line above includes usage from 4/20/20-5/20/20 billed around 6/1/20 AND usage from 5/20/20-6/20/20 billed on 6/26/20 (mailed 6/30/20).
- 2) Billed revenue includes water charges billed to residential, commercial, and governmental entities.
- 3) Gallons reported represent billed revenue as stated in Note #2 and excludes sales to City of Presontonburg.
- 4) Payments received is total customer payments posted by the District's billing system (includes sales tax, school tax, and other fees). Pass through items are approximately \$7,000.

Martin County Water District

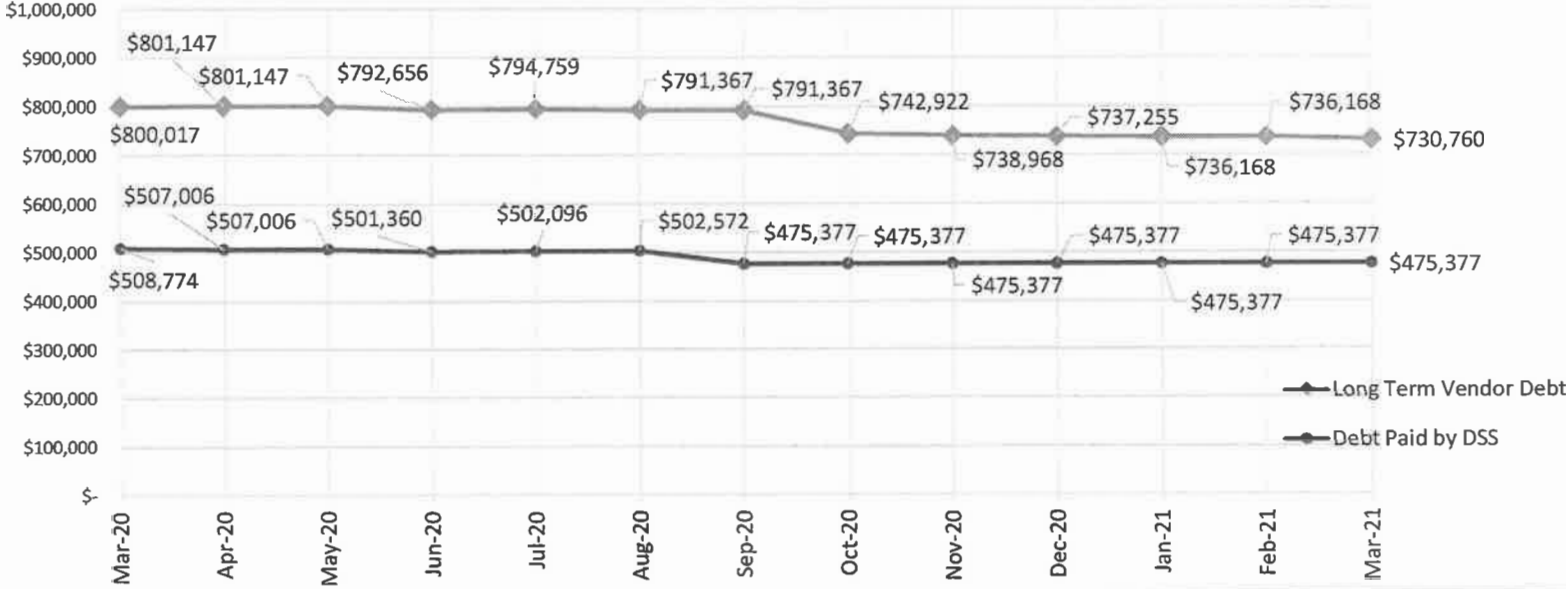
Net Income on a Cash Basis (Snapshot) EXCLUDES DEPRECIATION (format Revised 28 July 20)

	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21
REVENUE													
Customer Count	3,369	3,386	3,370	3,390	3,424	3,463	3,481	3,490	3,496	3,501	3,501	3,497	3,623
Payments Received	\$207,152	\$195,082	\$199,144	\$221,999	\$195,535	\$207,448	\$237,043	\$188,022	\$213,095	\$178,105	\$201,732	\$325,483	\$178,814
EXPENSES													
Operations Account	\$249,774	\$223,121	\$223,319	\$221,129	\$227,410	\$236,598	\$228,784	\$239,610	\$247,224	\$233,190	\$232,012	\$222,042	\$220,106
Transfers for debt serv funding	\$17,800	\$17,800	\$17,800	\$17,800	\$17,800	\$17,800	\$17,800	\$17,800	\$17,800	\$17,800	\$17,800	\$17,800	\$17,800
Payment Plans	\$6,500	\$6,500	\$5,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DSS EXP / (FUNDING)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MIS EXP / (FUNDING)													
Sub total	\$274,074	\$247,421	\$246,619	\$238,929	\$245,210	\$254,398	\$246,584	\$257,410	\$265,024	\$250,990	\$249,812	\$239,842	\$237,906
NET INCOME													
Cash Basis	-\$66,922	-\$52,339	-\$47,475	-\$16,930	-\$49,675	-\$46,950	-\$9,541	-\$69,388	-\$51,929	-\$72,885	-\$48,080	\$85,640	-\$59,092

Notes:

- 1: **Payments Received** are those received for the full month
- 2: **Expenses** are those planned and presented in the Board Packet for the referenced month
- 3: **Payment Plans** are payments towards outstanding debt not funded by DSS **Current balance= \$277,383 (Some fin charges forgiven & Prestonburg City decreased)**
- 4: **Operations Account Includes** the estimated DSS and MIS transfers (See list of Bills in Board Packet)
- 5: **MIS EXP** estimated funds applied to AWR Invoice (An Operations Account Expense) estimated DSS and MIS transfers
- 6: MIS fund beginning balance January 2020-of \$12,244 applied to AWR fee in June
7. Balance of debt -payments to be funded with unused DSS= **\$502,572**
- 8: Based on the requirements there will be deposits and subsequent withdrawals in DSS/MIS accounts with a likely sum of zero monthly

Martin County Water District Outstanding Vendor Debt



11:30 AM
03/12/21

Martin County Water District
Vendor Balance Summary
As of February 28, 2021

	<u>Feb 28, 21</u>
All Pumps Sales & Services	8,411.90
Brian Cumbo	31,034.10
CI Thornburg	36,345.26
CI Thornburg-VFD#2	12,071.32
Evans Hardware	30,362.72
Evans Hardware #2	18,820.64
Linda F Sumpter, CPA	151,942.35
Service Pumps & Supply	21,282.99
Soles Electric	13,300.00
United Rentals	56,722.94
Xylem	93,739.10
Zip Zone Express	256,726.95
TOTAL	<u>730,760.27</u>

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AUDIT DISCUSSION

**Martin County Water District, Inez KY
List of Bills for Consideration
23-Mar-21**

<u>Vendor</u>	<u>Description</u>	<u>Amount</u>
Operations Account		
1 AEP	Electric (26 bills) Estimated	\$ 22,645.16
2 Big Sandy RECC	Electric (9 bills) Estimated	\$ 2,285.01
3 Paintsville Utilities	Electric for token (1/8/21 to2/8/21) Estimated	\$ 23.77
4 Roy F Collier Comm. Center	Rent (March)	\$ 773.51
6 Martin County Water Distric	Sanitation February	\$ 131.90
7 Sales tax	12/2020 (estimated)	\$ 1,721.55
8 School tax	12/2020 (estimated)	\$ 5,211.99
9 Alliance Water Resources	3/1/21-3/15/21 O&M services	\$ 82,222.75
10 Alliance Water Resources	3/15/21-3/28/21 O&M services	\$ 82,222.75
11 Alliance Water Resources	1/21 Suddenlink Reimbursement (estimated)	\$ 74.14
12 Alliance Water Resources	1/21 Suddenlink Reimbursement (estimated)	\$ 34.95
13 Management Inf. Surcharge	Estimated (actual collected will be paid)	\$ 14,236.72
14 Debt Service Surcharge	Estimated (actual collected will be paid)	\$ 7,932.76
15 Walker Communications	Phone maintenance (February)	\$ 89.00
16 Cumbo Law Office	Legal Services	\$ 500.00
17 Kentucky Underground	811 Services (January)	\$ 144.00
18 Prestonsburg City's Utilities	Purchased Water	\$ 1,939.75
TOTAL		\$ 220,105.96

The following invoices have already been paid via auto debit or to avoid service interruption(s) and/or late fees.

2 Zoom	Zoom subscription (January)	\$ 15.89
TOTAL		\$ 15.89

Operations Account - Debt Service Funding

		Transfer Amounts
1 KIA	Monthly funding for KIA Bond/Loan	\$ 5,800.00
2 KACo	Monthly funding for lease payment	\$ 1,200.00
3 KRW/Regions Bank	Monthly funding for loan	\$ 10,800.00
TOTAL		\$ 17,800.00

TOTAL OPERATIONS **\$ 237,921.85**

**Martin County Water District, Inez KY
List of Bills for Consideration
23-Mar-21**

<u>Vendor</u>	<u>Description</u>	<u>Amount</u>
PAST DUE ACCOUNTS		2/28/2021
<u>(Based on cash availabilty)</u>		
2 CI Thornburg VFD # 2	VFD	\$ 12,071.32
3 Xylem	Pump rental	\$ 93,739.10
4 Soles Electric	Pump service	\$ 13,300.00
5 Service Pump & Supply	Pump service	\$ 21,282.99
6 All Pumps Sales & Services	Pump service	\$ 8,411.90
7 Cumbo Law Office	Legal service	\$ 31,034.10
8 Evans Hardware #2	Parts & supplies	\$ 18,820.64
10 United Rentals	Pump Rental	\$ 56,722.94
TOTAL		\$ 255,382.99
 DSS Account		
<u>(Based on cash availabilty)</u>		
1 Evans Hardware	Parts & supplies	\$ 30,362.72
2 CI Thornburg	Parts & supplies	\$ 36,345.26
3 Linda Sumpter CPA	Accounting fees	\$ 151,942.35
4 Zip Zone	Fuel	\$ 256,726.95
TOTAL		\$ 475,377.28
 Total Past Due Accounts		 \$ 730,760.27

**Martin County Water District, Inez KY
List of Bills for Consideration
23-Mar-21**

<u>Vendor</u>	<u>Description</u>	<u>Amount</u>
Security Deposit Account		
Customer		
1 John & Peggy Kirk	Deposit refund due to customer	\$ 18.10
2 Caitlyn Preston	Deposit refund due to customer	\$ 68.97
3 Ivalean Hager	Deposit refund due to customer	\$ 63.10
4 Kenneth Vanhoose	Deposit refund due to customer	\$ 20.89
TOTAL		\$ 171.06



Professional Water and Wastewater Operations

Martin County Water District

OUR MISSION

We partner with communities to deliver the finest water and wastewater services available at a competitive price. We are committed to keeping water safe and clean while serving people and taking care of communities with improved technical operations, careful management, and financial oversight, and ensured regulatory compliance.

Alliance Water Resources, Inc.

206 S. Keene
St. Columbia,
MO 65201

(573)874-8080

February 2021

Administrative

The billing staff continues to assist customers with payment plans and making sure to keep an open line of communication with every customer.

Training has begun for the office staff on the new GIS system. This allows the staff to successfully communicate and track leaks within our community. This new system is relaying leaks to the distribution team faster and more efficiently.

Water Treatment

Our team of operators came through once again. A recent winter weather event created both logistical and technical challenges. Dealing with a loss of electricity and a temporary loss of SCADA, the team ensured that the plant was staffed 24 hours a day, and service was restored as quickly as possible.

Our staff members have demonstrated the ability to work any shift. It is imperative that all our operators can handle the unique challenges that accompany any shift at any time.

Distribution:

The distribution team is fully staffed and receiving training appropriate to skill and experience level. They were able to detect impactful leaks without the assistance of customer complaints.

The team has fully implemented the Geographical Information System and began plotting meters via Geosync. This will be a powerful tool for the district for many years.

The distribution team also fixed a major system flaw up Cassell Branch where a 1" jumper was put in place years ago to feed a 4" main. Cassell Branch has been a problematic area because of the 1" jumper. Team members removed over 100' of 1" pipe and replaced it with 4" PVC. This is a major win for the hydraulics of our distribution system.



Martin County Water District

The distribution team also installed new piping over top of a hill slide on Poplar Fork restoring water to many homes who were without water for days. The installation was a great learning experience for our team. The 'Yellowmine' pipe that was used for the job was new to everyone in the district. Its strength, flexibility and durability made it the right pipe for the job.

Major repairs also took place on Rt 292 as the collapsing riverbank fell into the river and took over 100ft of previously installed main line with it.

The distribution team implemented a work schedule that allowed them to work around the clock and restore service to many customers on 292.

Summary:

The distribution team and plant operators continue to work together to effectively combat water loss.



 WATER RESOURCES®

Alliance

 Professional Water and Wastewater Operations

Martin County Water District

Customer Service

Repair crew members battled an ice storm during the month. More than one line was thawed out by my crew members with a torch. Customers, although frustrated at times with no water, were very pleased with the efforts of our team members.

Project Updates

SOURCE	AMOUNT	PROJECTS
AML Pilot Nexus Grant-2017	\$3,450,000	A, B, C, D
COE 531 (25% Match)	\$1,869,718	B, C
ARC Grant	\$1,200,000	F
AML Pilot Nexus Grant-2018	\$2,000,000	I
Total Grant	\$8,519,718	

Safety

February's safety meeting covered bloodborne pathogens and a CPR refresher. March safety meeting will be back injuries and covering slips, trips, and falls.

Regulatory

The Martin County Water Treatment Plant continues to operate within compliance of all state regulatory agencies.

Training

Several distribution employees are scheduled for examination.

Water Plant Operation

Water Pumped - December	
Total Water Production (gallons)	49,582,000
Total Water Metered/Billed (gallons)	13,668,000
Other Water Used (gallons)	878,000
Total Water Loss (gallons)	42,804,000
Portion of TWL due to Main Breaks (gallons)	26,336,000
Average Daily Flow (Million Gallons per Day)	1.771 MGD
Maximum Daily Flow	1.908 MGD
Fluoride Used (lbs.)	467 LBS
Chlorine Used (lbs.)	1,038 LBS
Lab Tests	3,269 TESTS

Water Quality Analysis

Test	Routine	Special	Repeat
Bacteriological	12 (Pass)	3 (Pass)	0
		Reported	Minimum Limit
Fluoride Plant Sample	31	0.68 mg/l Average	0.6 mg/l
Chlorine Distribution Sample	36	Low Readings Total - 0.35 mg/L Free – 0.34 mg/L	0.2 mg/l

Customer Service Request and Work Orders

Meter Reads	3447
Meter Sets	9
Turn offs-Close account	56
Taps	0
Meter Changes	13
Disconnects for Non-payment	1
Boil Notices	6
Line Locates	43
Water Leaks/Breaks	13
Other/Investigates	66



 WATER RESOURCES®

Alliance

 Professional Water and Wastewater Operations

Martin County Water District

Water Main Breaks & Service Lines

Date	Location	Pipe Size/Type	Estimated Water Loss (gallons)
2/3/2021	163 Groundhog Hollow	3/4" svs	299,694
2/8/2021	Groundhog Hollow	3/4" svs	149,847
2/10/2021	509 White Oak Rd	4" Main	14,092,818
2/19/2021	73 Tomahawk Estates	3/4" svs	109,440
2/23/2021	662 E Main St	8' Main	576,000
2/25/2021	7769 Riverfront Rd	3/4" svs	180,000
2/26/2021	15 Himlerville Rd	8" Main	5,793,000

Repair Expenses Ending January 2020

Expended	Actual YTD	Annual Budget	% Budget / Line Item
Bldg. & Grounds Maintenance	\$3,474	\$7,000	50%
Vehicle Maintenance	\$19,315	\$20,000	97%
Water Plant Maintenance	\$11,992	\$0	0%
Well Maintenance	\$1827	\$20,000	10%
Distribution System Maintenance	\$93,252.68	\$60,000	156%
Water Meter Maintenance	\$6,231	\$10,000	62%
Street Maintenance	\$3,166	\$8,000	40%
Totals	\$139,258	\$125,000	112%

Chemical Expenses Ending January 2020

Expended	Actual YTD	Annual Budget	% Budget / Line Item
Sodium Hydroxide	\$6,736	\$0	0%
Lime/Caustic Soda	\$75	\$0	0%
Polymer	\$12,639	\$0	0%
Alum	\$37,237	\$0	0%
Chlorine	\$22,511	\$25,000	90%
Permanganate	\$14,755	\$0	0%
Fluoride	\$6,938	\$0	0%
Chemicals Other - Water	\$20,471	\$85,000	24%
Totals	\$121,362	\$110,000	111%

Notes:

- 1) Building & Grounds Maintenance
 - a. \$0.00

- 2) Vehicle Maintenance
 - a. \$11.54 - Hutch Chrysler Dodge
 - b.\$ 581.11 - Capital Tire
 - c. \$372.94 - Capital Tire
 - d.\$ 84.75 - Fast Change
 - e. \$552.50 - Trinity Repair Services
 - f.\$ 210.41 - Trinity Repair Services
 - g.\$ 1,154.55 - Capital Tire
 - h.\$ 69.07 - Fast Change
 - i.\$ 87.90 - Fast Change

- 3) Water Plant Maintenance
 - a. \$100.00 - Mooney's HVAC
 - b.\$ 1,300.00 - Mooney's HVAC

- 4) Well Maintenance
 - a. \$0.00

- 5) Distribution System Maintenance
 - a. \$46.93 - R&J Building
 - b.\$ 130.00 - John Goble
 - c. \$1,200.00 - Howell's Recycling
 - d.\$ 23.36 - R&J Building
 - e. \$26.39 - R&J Building
 - f.\$ 1,600.00 - John Goble



Martin County Water District

- g. \$1,600.00 – John Goble

- 6) Meter Maintenance
 - a. \$0.00

- 7) Street Maintenance
 - a. \$0.00

- 8) Sodium Hydroxide
 - a. \$0.00

- 9) Lime/Caustic Soda
 - b. \$0.00

- 10) Polymer
 - a. \$0.00

- 11) Alum
 - a. \$3,376.59 – CITCO Water

- 12) Chlorine
 - a. \$966.50 – CITCO Water

- 13) Permanganate
 - a. \$0.00

- 14) Fluoride
 - a. \$0.00

- 15) Chemicals Other – Water
 - a. \$432.00 – CITGO Water

PUBLIC SERVICE COMMISSION

Monthly Water Loss Report

Water Utility: Martin County Water District

For the Month of: February Year: 2021

LINE #	ITEM	GALLONS (Omit 000's)
1	WATER PRODUCED AND PURCHASED	
2	Water Produced	49,582
3	Water Purchased	
4	TOTAL PRODUCED AND PURCHASED	49,582
5		
6	WATER SALES	
7	Residential	10,303
8	Commercial	2,253
9	Industrial	
10	Bulk Loading Stations	
11	Wholesale	
12	Public Authorities	2,715
13	Other Sales (explain)	
14	TOTAL WATER SALES	15,271
15		
16	OTHER WATER USED	
17	Utility and/or Water Treatment Plant	744
18	Wastewater Plant	
19	System Flushing	
20	Fire Department	
21	Other Usage (explain)	
22	TOTAL OTHER WATER USED	744
23		
24	WATER LOSS	
25	Tank Overflows	
26	Line Breaks	28,407
27	Line Leaks	5,160
28	Excavation Damages	
29	Theft	
30	Other Loss	
31	TOTAL WATER LOSS	33,567
32		
33	Note: Line 14 + Line 22 + Line 31 MUST Equal Line 4	
34		
35	WATER LOSS PERCENTAGE	
36	(Line 31 divided by Line 4)	67.70%



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March 19, 2021

Martin County Utility Board Members
387 Main Street, STE 140
Inez, Kentucky 41224

Dear MCUB board members,

I'm writing on behalf of Martin County Concerned Citizens to bring to your attention some of the groups' concerns regarding (1) rate affordability and the use of the customer assistance funds that are being made available, (2) the district's practices during low pressure events and water main breaks of providing emergency notices and issuing boil water advisories, and (3) the district's handling of customer calls and complaints. We greatly value the cooperative relationships between our group and Alliance and members of the Martin County Utilities Board. We ask for time on the agenda at the upcoming board meeting to present these concerns.

Affordability

As you all know, prior to the pandemic and prior to the last rate increase, MCCC and ACLC released a study showing that water was already unaffordable for more than 45% of the county's residents.¹ The last rate increase and the pandemic have only compounded that problem.

And now, the district is ready to ask for another rate increase.

MCCC is aware of how expensive it is to run this district. We know that much of that expense is due to bad decisions and negligent management prior to Alliance's time here. However, there are things that can and should be done to alleviate the real harms that will come with any additional rate increase.

First, the district must do whatever it can to get its debts under control. Specifically, the district should make every attempt to negotiate with its vendors to lower its debts prior to seeking a rate increase. The district is now more than \$1 million in debt. Before seeking more revenues through customer rate increases to cover that huge debt, board members should do everything possible to negotiate lower pay offs for that debt. Many of the vendors to whom the debts are owed are local and know that the residents of this county cannot afford another rate increase to pay off those high debt amounts. MCCC will gladly work with you all to help those vendors better

¹ <https://aclc.org/wp-content/uploads/2020/08/Drinking-Water-Affordability-Crisis-Martin-County-Kentucky-1.pdf>.



understand how important it is to get the past debt paid down quickly so as to minimize any necessary rate increase.

Second, several tranches of federal and state money have been provided for customer assistance, and now FEMA money is likely available that could be used for repairing and rebuilding parts of the system. MCCC would like to work with the district to ensure that as much money as possible goes to help Martin County's residents better afford their water bills and, at the same time, ensure a steady revenue stream for the district. In addition to the FEMA disaster assistance funding, recently the following funds have been announced to help customers pay past due water and wastewater bills:

1. In January 2021, \$38 million was made available for utility assistance. That money is distributed through the Big Sandy Area Development District to units of local government. Those local government units can request up to \$200,000 each to help pay for overdue utility bills in their jurisdiction. We have asked but do not know whether MCUB or the county has requested this funding and what the response has been. More information about this funding can be found at: https://kydlgweb.ky.gov/Articles/16_articleView.cfm?NewsID=706.

2. In February 2021, the \$264 million Healthy at Home Eviction Relief Fund was announced that provides eviction and past due utility bill relief for tenants in Kentucky. Tenants are able to apply for this relief funding online at: teamkyhherf.ky.gov.

3. In December 2020, the appropriations bill allocated an additional \$639 million nationally for customer assistance for water and wastewater bills, but we do not know yet how or when that money will be allocated locally.

4. Finally, the \$1.9 trillion COVID relief bill that just passed added \$500 million to that December 2020 allocation.

We want to help make sure that the water district and its customers are aware of all of these relief funding sources and are taking full advantage of them. MCCC would be happy to work closely with the board and Alliance to ensure that these funding sources are put to full use.

Low Pressure and Line Breaks: Emergency Reporting and Issuance of Boil Water Advisories

As we all know, Alliance has been working feverishly to respond to numerous line breaks and low pressure events throughout the system in recent months. We appreciate how hard Alliance employees have been working to keep water flowing to customers. However, we are concerned that the regulations governing line breaks are not always being carefully followed.

Whenever there is a line break that drops pressure below 20 psi or whenever there is a break that takes more than 8 hours to repair, the district is required to report that to the Division of Water. See KDOW Public Water System: Consumer and Boil Water Advisory Guidance, which I attach here. In addition to that reporting, Alliance has agreed that whenever pressure drops below 20psi, whenever repair takes more than 8 hours, or whenever, because of a break, Alliance believes that



pressure somewhere in the system has dropped below 20psi, they should issue a boil water advisory (BWA).

Unfortunately, we've found that the emergency reporting and the BWA issuances aren't always occurring. We have looked at the emergency notification that the district has sent to DOW in the past year, and note that several of the recent outages in Hode, Milo, Big Elk, and Route 292 were not reported. Likewise, BWAs were not always issued related to those outages. Alliance has explained that in some instances there was already a BWA in place, and they did not feel another BWA was necessary. We disagree with this assessment. The point of a BWA is customer notification. A customer in Hode, who did not lose water during an initial BWA would have no reason to know that the former BWA was still in effect and should apply to a more recent water loss or low pressure event. In addition, there have been issues with areas of the county that should be covered not being specifically mentioned in the BWA notice.

We hope and believe these matters will be easy to correct. We want to work with you to make sure that the district properly reports all line breaks to DOW and issues BWAs that make sense and provide good notice from the customer's standpoint.

Customer Complaints

When MCCC first met with Alliance, our primary ask was to make sure that the district had good procedures to ensure that customer calls and complaints were dealt with in a thorough and respectful manner. And, from most reports, customer service has improved dramatically, with customers being treated far more respectfully than they had in the past. We've asked that Alliance develop standard procedures that would ensure that every customer call is logged and follow through is assured. We've also asked that Alliance provide reporting at each board meeting on how many customer calls have been received, what the nature of those calls has been, and what the follow through has been. We are now reiterating that request.

Customer contact is a critical component in getting to a point where Martin County water customers trust the water and trust the water district. We hope that Alliance can develop a process so that each customer call is logged and tracked so that the board and the public can follow what issues the customers are bringing forward and what response they are getting.

Conclusion

MCCC would like the opportunity to discuss these matters at the upcoming board meeting. We ask that these be added to the agenda. Thank you for your assistance, and we look forward to speaking with you all.

Sincerely,

A handwritten signature in cursive script that reads "Mary Varson Cromer". The signature is written in dark ink and is positioned above the printed name.

Mary Varson Cromer

Encl.

Kentucky Division of Water Public Water System Consumer and Boil Water Advisory Guidance

Revised February 2014

Background

Consumer advisories provide pertinent, important information to the public regarding their drinking water. Such advisories cover microbiological as well as chemical contamination in addition to other information of concern. In practice, the majority of consumer advisories are “boil water advisories.”

The term “coliform bacteria” refers to a large group of facultative aerobic bacteria common in the environment and generally not harmful. The presence of coliform bacteria, as measured by the total coliform test, is simply an indicator that a problem with the water treatment plant or distribution system exists and that the water may be contaminated. There are two (2) groups of coliform used as measures of drinking water quality in Kentucky:

- Total coliform; and
- *Escherichia coli* (*E. coli*): a sub-group of fecal coliform bacteria

Positive total coliform tests go through a confirmation stage to determine if the coliform bacteria found are of fecal (*E.coli*) origin. Further investigation is necessary, including the collection of additional samples. If fecal coliforms or *E. coli* are **confirmed** in drinking water, then it is likely that disease-causing microorganisms are present. “Results from a single sample or set of samples are typically not cause for issuing a BWA... Detection or sudden increase of any microbial indicators in a single sample or set of samples is not sufficient grounds to issue a BWA [boil water advisory].” (AWWA M48)

“Boil water advisories require a considerable amount of thought if they are to be carried out in timely fashion. One of the most important aspects of BWAs is determining what circumstances trigger the event ... Customer confidence may be eroded or elevated depending on the timeliness and accuracy of the information they receive. Professional judgment and discretion are necessary in making decisions on the issuance of an advisory ... In situations where microbial results are available and system failures are documented, the decision to issue an advisory should be straightforward.” (AWWA M48) If the problem is isolated to a specific zone or tap, system-wide boil water advisory may not be warranted. The advisory should be issued only for that area.

Boil Water advisories are a safeguard to protect the public. When reasonable doubt exists, the protective decision is to issue the advisory. Public water systems (PWS) should develop BWA standard operating procedures specific to their system, discuss those procedures with their DOW Regional Office and communicate the procedure to all employees.

Regulatory Language

Definitions: 401 KAR 8:010

Consumer Advisory: A notice to the consuming public through radio, television, direct mail, electronic mail, posting, newspaper or other media and that conveys the quickest and most effective manner:

- a) Information that the water provided by a system may cause adverse human health effects if consumed and what action the public is advised to take; or
- b) Other information that the public needs to know about its water.

Boil Water Advisory (BWA): A type of consumer advisory that provides notice to the consuming public through radio, television, direct mail, electronic mail, posting, newspaper or other media and that conveys the quickest and most effective manner:

- a) Information that water provided by a system may cause adverse human health effects due to possible biological contamination if consumed, unless it is first boiled for three (3) minutes at a rolling boil; and
- b) What action to take.

Advisory Regulatory Requirements: 401 KAR 8:020

Public water systems (PWSs) and semipublic water systems **may** issue boil water advisories if the system believes an advisory is warranted.

The Energy and Environment Cabinet **may** direct that a boil water advisory be issued when confirmed positive bacteriological sample results have been received (including E. coli or fecal coliform) or conditions exist within a water system that indicate a possible adverse health effect from the consumption of the water distributed by the system.

The cabinet **may** issue a consumer advisory if conditions exist within a water system that indicate a possible adverse health effect from the consumption of water by the public or when other information of interest to the consumer needs to be communicated.

In addition, a public or semipublic water system is required to **immediately** notify the local health department serving the affected area of a BWA [Section 2(9)(c)(1-2)]. The notification can be made by phone, fax or email during normal business hours or through a mutually agreed-upon manner for after-hours notification. A PWS can also develop a written protocol with the local health department that describes when and how the system shall notify the affected health department if the system issues a boil water advisory or consumer advisory. The protocol shall address:

- a. For which types of advisories the system shall notify the affected health department;
- b. What procedures shall be used to notify and under what circumstances;
- c. How soon after the occurrence the notification shall be made; and
- d. To whom the notification shall be made, during and after business hours.

Line Break Reporting Requirements: 401 KAR 8:150

1. A PWS shall notify the cabinet immediately if it experiences a loss of pressure below twenty (20) pounds per square inch (psi) in the area surrounding the break or if line breaks require more than eight (8) hours to repair. These reports are not required if the loss of pressure or line break occurs in a service line serving a single family residence. The issuance of a BWA is NOT mandated by regulations.

NOTE: The eight hours begin when the system becomes aware of the break.

2. Community and nontransient noncommunity public water systems shall maintain a log of all breaks or ruptures (including single family residential service line breaks) which includes:
 - Location of the break or rupture,
 - Date and time it was discovered,
 - Population affected,
 - Length of time required to repair,
 - Date and time disinfectant residuals are detected,
 - Date and time bacteriological samples are taken, and
 - Results of bacteriological tests.

The log shall be available for inspection by the cabinet. The PWS is NOT required to report all line breaks and ruptures to the cabinet, only those that meet the criteria in #1 above.

Emergency Repairs: 401 KAR 8:150

For line repairs due to breaks or ruptures (including single family residential service line breaks), the system shall thoroughly flush the break area and maintain at least a minimum detectable disinfectant residual (depending upon type of disinfectant used).

Public water systems may leave the line in service before bacteriological sampling and may forgo a boil water advisory if:

- The line can be repaired under pressure (i.e. maintain a minimum of 20 psi in the line under repair);
- The break area is thoroughly flushed; and
- At least the minimum disinfectant residual (depending upon type of disinfectant) is maintained.

The system shall take at least two (2) bacteriological tests, one (1) located before or just upstream of the break or rupture and one (1) located behind or just downstream of the break or rupture, as close to the break or rupture as practical. If necessary, additional samples may be required to be representative of the area affected by the break. The sample bottles shall be clearly labeled as “special” tests and the results submitted to the cabinet clearly identified as “special” samples.

Records of the bacteriological results shall be submitted to the cabinet with the routine monthly compliance bacteriological samples unless the “special” samples are required to lift a boil water advisory. Samples needed to lift boil water advisories shall be submitted to the cabinet as soon as results are known and attached to the Incident in TEMPO. The results of “special” bacteriological samples shall be maintained for one (1) year.

Boil Water Advisory Guidance (other than a main break situation):

Issuing a BWA

A BWA should generally be issued if:

1. High turbidity levels in filtered surface water indicate the potential for pathogen breakthrough and interference with disinfection efficiency. Sustained combined filter effluent turbidity readings greater than 1 NTU for 6 or more hours, OR a confirmed turbidity level greater than 5 NTU shall trigger a boil water advisory unless the turbidity is attributable to other circumstances unrelated to filter malfunction (i.e., iron or manganese particles). A BWA is NOT warranted for iron and manganese problems.
2. The occurrence of a key water treatment plant process malfunction, not immediately repaired, which results in unfiltered surface water OR non-chlorinated water being discharged into the distribution system.
3. There is free chlorine disinfectant residual at the entry point to the distribution system less than 0.2 mg/L or total chlorine disinfectant residual less than 0.5 mg/L for chloraminated systems for more than 4 hours or in situations in which the system has difficulty restoring a chlorine residual after measures to do so have not succeeded;
4. A water main break, pump failure or other water distribution system malfunction results in portions of the system having zero (“0”) pressure or with negative pressure zones.
5. There is the occurrence of a cross connection or known back siphon episode with an unapproved water supply in which the microbiological quality of the water may be compromised. Examples: flooded wellhead or treatment plant, water main break in a stream crossing.

6. A Groundwater source is confirmed under the direct influence of surface water (GWUDI) and the water systems associated with that source has not installed filtration.
7. The presence of other pathogens such as *Giardia* and *Cryptosporidium* is confirmed at a level and under circumstances that the Division of Water and the state epidemiologist deem a risk.

Strong consideration should be given to issuing a BWA in the following cases:

1. Breaks impacting a school (some utilities make this a policy, but prior consultation with the Board of Education involved is recommended);
2. Breaks in remote part of system which cause delay and difficulty finding or isolating the break;
3. Breaks in a low elevation segment of a high relief (hilly) area where some residents will have pressure loss/water outage;
4. Breaks adjacent to older or damaged sewer lines;
5. Breaks in very low flow/demand areas that may have lower disinfectant residuals;
6. An acute bacteriological violation has occurred (confirmed presence of fecal coliforms or E. coli bacteria). Best professional judgment must be used with regard to the scope or severity of the problem, based on the number and location of positive samples in relation to the size of the system. If chlorine/chloramine residuals in the distribution system are greater than the minimums required, the option exists to wait for complete speciation to issue the BWA; and
7. State or local health department officials have confirmed a waterborne disease outbreak directly associated with the public water supply.

Customer Notification Content

PWS shall carefully determine the appropriate area to which it issues the advisory. The area should include only those customers potentially at risk. The PWS should clearly define the boundary of the affected area using local landmarks or roadways (e.g. "James Bickford Road") to provide clear information to customers. Do not place a system wide BWA when the affected area may be isolated. For example, if only three houses on a dead end spur main lack water pressure after a break on that line, then a system-wide BWA is not appropriate.

Affected customers should be notified that:

- A line break has occurred;
- Repairs have been made;

- Customers should flush household pipes/faucets, home automatic icemakers, water fountains, etc.

The notification should state that customers with infants, elderly or immuno-compromised individuals in the household, should seek advice about drinking water from their health care providers. This is a standard notification required to be included in each PWS's annual Consumer Confidence Report (Water Quality Report).

The BWA notification is similar to that given customers when a PWS conducts its annual or semi-annual flushing program. The flushing notification, however, does not trigger notification of Health Departments or the requirement of DOW authorization to end the incident (as required of BWAs). The PWS should carefully label notifications to minimize confusion between BWAs, Consumer Advisories and routine flushing. For example, "Water Line Break Notification".

Distribution of the Notification

If a BWA is issued by the water system, then the system shall immediately notify the Division of Water and the local health department via a protocol established between the system and the health department. The Division of Water may check to ensure appropriate local health departments have been contacted by the system and may contact the Division of Local Health, Sanitation Branch for major incidents such as those of system wide impact.

If the Division of Water issues a BWA, the same distribution protocol should be followed as if the system had issued the BWA.

The water system shall notify the affected public via doorknob hangers, newspapers, TV, radio or any other media (such as Facebook, Twitter or emergency ring-down systems) having an immediate public impact. When feasible, door-to-door public notification of an advisory should be conducted, with the advisory placed in plain site of the resident.

The public water system shall notify hospitals, nursing homes and other sensitive populations about the event, if appropriate.

Bacteriological Sampling to Lift the Boil Water Advisory

An adequate number of samples shall be collected and analyzed for total coliform bacteria as follows:

- With regard to an acute Total Coliform Rule violation, the minimum number of total coliform samples to be collected shall follow the normal protocol for repeat sampling pursuant to the Total Coliform Rule.
- With regard to a **system-wide BWA**, it is recommended that the minimum number of samples to be collected should be:

<u>Population Served*:</u>	<u>Minimum # of Samples</u>
25-1000	3
1001-2000	4
2001-3000	5
3001-4000	6
4001-7000	7
7001-10,000	8
10,001-25,000	9
25,001-50,000	10
> 50,000	10 or 10% of required monthly samples (whichever is greater)

*Population is determined as in 401 KAR 8:200 Section 3 by either a service connection multiplication factor, census data or actual population count (if in a small area).

If 10 samples or fewer are collected, all sample results shall be negative for total coliform to remove the BWA. If a system serving a population less than or equal to 50,000 elects to take more than 10 samples, no more than one sample shall be positive for total coliform, but it **must be** *E. coli* negative. NOTE: If any samples are positive, the appropriate resampling shall occur.

If a BWA is restricted to a smaller portion of the distribution system, then the required number of total coliform samples should be proportionally lower.

A consecutive system (purchaser) affected by a BWA from their producing system shall also issue a BWA for the area in their system that receives water from that producer.

- Sampling to lift the BWA in the consecutive system shall occur in conjunction with or after the BWA in the producing system has been lifted and with consultation with the appropriate DOW Regional Office.
- Consecutive system sampling may be based on flow, hydraulic modeling or other means to determine the movement of the potentially contaminated water.
- The number of samples from the consecutive system would be based only upon the population of the area affected.

Lifting a Boil Water Advisory

BWAs remain in effect until DOW or the Department for Environmental Protection's Environmental Response Team (ERT) determines or approves that the advisory may be lifted.

A laboratory certified by the cabinet to perform drinking water analyses shall perform microbiological, chemical and radiological testing.

Analytical results shall be forwarded by the laboratory to the cabinet prior to the cabinet's authorizing the lifting of a BWA issued for public health reasons. Outside of routine working hours, the cabinet will cooperate to authorize lifting a BWA when the laboratory verbally informs the cabinet's designated representative of the results. The representative can be reached through the cabinet's 24-hour reporting line (800/928-2380).

Should the ERT lift a BWA during off-hours, weekends and holidays, the information used to lift the BWA should be forwarded to the appropriate Regional Office on the next business day.

The following criteria must be met:

1. Satisfactory analytical results (bacteriological and/or turbidity) coupled with free chlorine residuals of 0.2 mg/L or greater, or total chlorine residuals of 0.5 mg/L for chloraminated systems, throughout the distribution system;
2. Sufficient flushing has occurred in the distribution system to eliminate water that was or might have been contaminated;
3. Treatment deficiency has been corrected; **or**
4. For a waterborne disease outbreak, the state epidemiologist, local health department and DOW must confirm that the health risk is now minimal.

Consumer Advisories

Consumer advisories (CA) are for those situations that necessitate public notification regarding drinking water contamination events that are not bacteriological in origin. Consumer advisories are typically related to chronic exposure (bacteria present an acute hazard) to a contaminant and can be more restrictive as to water use. A lesser use of a CA would be to provide other information that may affect customer health. Common examples include:

Drinking Water Contamination

1. Elevated turbidity due to the presence of iron or manganese. These chemicals create "color" in the water, not particulates. By boiling water that contains manganese, one could concentrate the metal, resulting in a taste or staining of clothes or plumbing fixtures.
2. Detection of a chemical-based cross-connection.
3. Elevated levels of regulated contaminants (such as arsenic, lead) or non-regulated contaminants such as gasoline or crude oil in the source water or distributed water.
4. Terrorism event

Other Information Pertinent to the Consuming Public

1. Notification of a chemical change at the water plant that would affect how the public would perceive the water or how the water would impact customer health (change in taste, hardness, disinfectant).
2. Distribution infrastructure improvements that could result in the shutting off of water for a period of time (new lines, replacing lines/meters, slip-lining)

Consumer advisory notifications can follow the same guidelines as those for boil water advisories. The advisories should be tailored for each event, providing easy-to-understand information through the quickest and most effective means of communication. Sufficient information should be given to explain the event and its duration, its consequences to the consuming public, actions to be taken during the event and a water system phone number.

Consumer advisories (for those incidents other than boil water advisories) can be issued by the Division or by the water system. If the event involves elevated levels of a contaminant or a terrorism event, the applicable DOW Regional Office shall be notified immediately. The Regional Offices do not need to be notified of those public information advisories that do not involve public health.

Consumer Advisories that involve public health and have been reported to the DOW remain in effect until the DOW determines or approves that the advisory be lifted. Lifting a consumer advisory will be dependent upon the event but will require resolution of the situation that led to the advisory. This may require additional sampling if related to a chemical cross-connection or elevated source water contaminants such as manganese or may simply involve notification that the event has ended (main replacement, new meters).

Resources

American Water Works Association, Manual of Water Supply Practices #M48, "Waterborne Pathogens"; 1st edition 1999 and 2nd edition 2006

Environmental Protection Agency and Centers for Disease Control and Prevention, "Drinking Water Advisory Communication Toolbox"; 2013

APPENDIX A

EXAMPLES

BOIL WATER AND CONSUMER ADVISORIES

Situation	Resolution	BWA? Yes or No
High filtered water turbidity; high filtered water manganese	Turbidity reading is false due to color from the manganese; not true particulate turbidity; optimize treatment; consider flushing system	No
High filtered water turbidity; overdose of permanganate confirmed	Turbidity reading is false due to color from the permanganate; not true particulate turbidity optimize treatment; consider flushing system	No
CFE turbidity at 1.6 NTU for 4 hours	Optimize treatment; consider flushing system	No, not over 6 hours in duration
CFE turbidity spiked at 6.1 NTU for 15 minutes	Optimize treatment; consider flushing system	Yes, greater than 5 NTU regardless of duration
Chlorine cylinder empties and is not caught until operator returns from rounds	Immediately change chlorine cylinder; consider flushing system	Depends on how long residual in plant tap below 0.2 free or 0.5 total –if longer than 4 hours, yes (this is a judgment call on the part of the field)
Upgrades on filters under way Settled water inadvertently sent through an empty filter bed	Immediately valve off the empty filter bed; Consider flushing the system	Yes, as unfiltered water entered the system
On-line chlorine analyzer records a free chlorine residual of 0.15 mg/L for 20 minutes; confirmed that not analyzer/recorder malfunction	Raise chlorine residual; investigate cause of residual loss	No, as entry point chlorine residual was less than 0.2 mg/L for less than 4 hours Refer to 8:150 Section 1(2)(b). This is also a judgment call on the part of the field.
Ice storm knocks off power to the water plant for 1 day Despite conservation efforts, portions of the town are without water	Call power company; investigate backup power sources; when power restored, consider slow flushing to refill pipes	Yes, as portions of the system had no pressure or possible negative pressure
Main break that requires 6 hours to repair	Repair main, conduct bacteriological sampling Report results of sampling Maintain main break log	No, but customers affected should be notified that a break has occurred and to flush water before using. Sensitive populations should seek medical advise
Break on a small line that is repaired under pressure	Repair main; conduct bacteriological sampling; report results of sampling; maintain main break log	No

Situation	Resolution	BWA? Yes or No
Main break that lowers pressure in the area to 13 psi; repaired in 2 hours	Repair main;; conduct bacteriological sampling;; notify cabinet; report results of sampling; maintain main break log	No, but customers affected should be notified that a break has occurred and to flush water before using. Sensitive populations should seek medical advise
Booster pump in remote area burns up; pressure drops from 52 psi to 30 psi	Repair pump to restore pressure	No
Riverbank well for a true GW system is flooded during a record flood event; wellhead protection questionable for this event	Once flooding recedes, inspect wellhead and make necessary repairs	Yes, as this is considered a cross-connection with a non-potable source
Utility receives reports of sewer odors coming from faucets in a subdivision hair-like particles in water	Investigate immediately; check storage tanks (this really happened—dead body in tank)	YES (this would most likely become a Consumer Advisory)
During routine bacteriological sampling, notice a hard-piped cross-connection between water supply and fertilizer	Immediately notify company and utility of cross-connection; disconnect cross-connection; monitor until install approved backflow protection devices	No, as not microbiological contamination; flush system
During a routine inspection, field finds documentation that GW system is considered “under the influence of surface water” and has not yet installed treatment	Enforcement?	Yes, as unfiltered surface water is entering the distribution system
A customer has their water tested for Giardia and the test comes back positive; lab is not certified to test for Giardia; no confirmation was done; mo reports of giardiasis in area and no treatment upsets	Consult with medical community; consult with DOW	No, as the Giardia result is suspect and not supported by water plant malfunctions or by disease occurrence
Main break in the middle of a stream crossing during a flood event	Repair main; conduct bacteriological sampling; report results of sampling; maintain main break log	Yes, as the potential is high for contamination from the turbid water

Situation	Resolution	BWA? Yes or No
Laboratory confirms presence of E.coli in a distribution sample	Consider flushing area. If chlorine residual is low, raise residual in area	Yes—this could become a Consumer Advisory
Laboratory reports a positive total coliform sample; confirmation not done yet; free chlorine residual was 1.7 mg/L		No, as this is not a confirmed sample positive for E.coli or fecal coliform and the free chlorine residual was greater than 0.2 mg/L. Wait for confirmation
Water main break in contaminated soil (i.e. sewage lateral lines, sewer line in same ditch) regardless of repair mechanism or if under pressure	Repair main; conduct bacteriological sampling; report results of sampling; maintain main break log	Yes, as sewage is contaminated. Could issue BWA for localized area.
Contractor breaks water line while excavating petroleum UST with significant free product around line and pressures drop to 13 psi	Repair main; conduct bacteriological sampling; report results of sampling; maintain main break log. Depending upon water main material, may need to replace entire line; hazardous waste cleanup issues	No, as boiling the water would release the petroleum products into the air. This could cause explosions as well as illness. This would be a Consumer Advisory with specific instructions.
System (or inspector) discovers that entire system has no chlorine residual; flushing did not resolve the situation	Check residual at master meters, investigate any sources of chlorine demand, etc. Determine if a chemical issue (i.e. high Mn)	Yes, as no chlorine residual could be an indication of bacteriological contamination; rule out any chemical contamination first Situation may also warrant an NOV
Pressure routinely below 20 psi in the distribution system or below 30 psi on the discharge side of customer meters	Contact DWB for sanction documentation	If the potential for backflow exists, Yes. Base decision on experience with system
Low to no chlorine residual in one area of the distribution system; system is doing HPCs in lieu of chlorine residuals with results less than 500 cfu/ml	Investigate cause of low or no chlorine residual and resolve	No, as water in the distribution system with an HPC count less than 500 cfu/ml is deemed as having “adequate disinfection residual”
Water system will be doing an extensive main relocation in a subdivision	Customers could experience low pressure/see and hear construction work	No, issue a Consumer Advisory

Situation	Resolution	BWA? Yes or No
Water system decides to use booster chlorination in one area of the distribution system	Customers notice slight chlorine smell	No, issue a consumer advisory for that area explaining the situation
Contamination detected in a suburban area not traceable to a cross-connection—possible terrorist event	Work with federal authorities and other responders to determine contaminant then decontaminate the system.	No, as most likely not bacteriological. May need to issue a “Do not drink” notification

BOIL WATER ADVISORY NOTICE SHEET

DATE: _____

TIME: _____

LOCATION: (INCLUDE BEGINING LOCATION AND ENDING LOCATION)

REASON FOR REPAIR:

SIZE OF LINE: _____

SERVICE OF LINE: _____

TYPE OF LINE: (i.e. PVC, AC OR CTS) _____

REPAIRED? (YES OR NO) _____ IF NO, ESTIMATED TIME TO REPAIR? _____

NUMBER OF CUSTOMERS AFFECTED: _____

FIELD WORKERS

LENGTH OF TIME IT TOOK TO REPAIR LEAK: _____

DATE AND TIME CHLORINE WAS TAKEN: _____

DATE AND TIME BACTERIOLOGICAL SAMPLE WAS TAKEN: _____

RESULTS OF BACTERIOLOGICAL SAMPLES (POSITIVE OR NEGATIVE): _____

BOIL WATER ADVISORY NOTICE INSTRUCTIONS

- **Call Division of Water (606-435-6022 or after hours 502-564-2380) to get NC#.**
- **Go to server G, type “boil water” in search bar.**
- **Choose any boil water document, change date, time, NC#, location, reason for repair, number of customers effected, etc.**
- **Save as: Boil Water-current date.**
- **Print copy to put in boil water binder and copy for front desk.**
- **Go to your email- choose boil water contacts, attach file.**
- **Subject-Boil water advisory**
- **Type “See Attachment for message” in the body of the email.**

BOIL WATER ADVISORY PROCEDURES

All Boil Water Advisory (BWA) will be given according to 401 KAR 8. The following is the procedure for issuing a BWA in accordance with Kentucky regulations.

It is important to know that a BWA is not mandated by Kentucky regulations. However, notification of the Environmental and Energy Cabinet and the health department is always needed when water pressure drop below 20psi or the leak takes longer than 8 hours to fix from the time the system is aware of the break.

When issuing a BWA Kentucky regulations require that you use the best effective means of notification to the customer. The KAR states that the best method is personal notification through door knockers.

If a BWA is issued, the following methods will be used for notification of customers:

1. Physical Notification-Notices will be either hung on the customer's door or preferably, handed to customers affected by the advisory.
2. One Call System- will be utilized to contact the individuals specifically affected by the break.
3. News media or Social Media-This form of notice will only be used if necessary. Specifically, if the BWA covers too large of an area to be able to effectively physically notify.

*If the area affected covers a large portion of our system. i.e a system wide boil water advisory, then all possible means of notification will be utilized.