

SUMMARY ADDENDUM  
TO  
PRELIMINARY ENGINEERING REPORT

DATED July 2020

FOR

North Mercer Water District – Water System Improvements  
(Name of Project)

APPLICANT CONTACT PERSON Mischell Lee, Office Manager

APPLICANT PHONE NUMBER (859) 865-2292

APPLICANT TAX IDENTIFICATION NUMBER (TIN) 61-0648569

I. GENERAL

- A. Proposed Project: Provide a brief description of the proposed project. In addition to this summary, the applicant/engineer should submit a project map of the service area.

The proposed project is to replace approximately 22.5 miles of water main scattered throughout the NMWD system. The majority of these transmission mains are of asbestos cement material and have been in service for over forty years. Additionally, some of these mains are undersized for the volume of water that needs to be transported through this area. These mains are scattered throughout the distribution system and are present in seven different areas of the distribution system.

Of the seven areas of replacement to be conducted, two of these will include improvement in pipe size. These two areas are located at the beginning of Kirkwood Road on US 127 and on Mackville Road between the Rose Hill Tank and Johnson Road. All other water mains to be replaced will remain the same size. The water mains and service lines in all of these areas have been targeted for replacement due to the number of leaks that District personnel have encountered in recent years.

Additionally, the project will replace approximately 475 customer service lines that are older and are susceptible to various malfunctions due to the age. These replacements will help to reduce the District's overall operating expenses.

Lastly, should project funds be available the District will seek to install automatic flush hydrants, replace a control valve in an existing pump station (US 127), add additional chlorinators throughout the distribution system, conduct well testing to examine the potential for additional sources of water, conduct building improvements for the existing maintenance building and install security equipment at the main office.

II. **FACILITY CHARACTERISTICS OF EXISTING SEWER SYSTEM** **N/A**

A. ***Sewage Treatment:***

1. ***Type*** \_\_\_\_\_
2. ***Method of Sludge Disposal*** \_\_\_\_\_
3. ***Cost per 1,000 gallons if sewage treatment is contracted:***  
\$ \_\_\_\_\_
4. ***Date Constructed*** \_\_\_\_\_

B. ***Treatment Capacity of Sewage Treatment Plant*** \_\_\_\_\_

C. ***Type of Sewage Collector System (Describe)***

**D. Number and Capacity of Sewage Lift Stations**

**E. Sewage Collection System:**

**Lineal Feet of Collector Lines, by size** 6" \_\_\_\_\_ 8" \_\_\_\_\_  
10" \_\_\_\_\_ 12" \_\_\_\_\_, Larger \_\_\_\_\_  
**Date(s) Constructed** \_\_\_\_\_

**F. Conditions of Existing System: Briefly describe the conditions and suitability for continued use of facility now owned by the applicant. Include any major renovation that will be needed within five to ten years.**

**III. FACILITY CHARACTERISTICS OF EXISTING WATER SYSTEM**

A. Water Source: Describe adequacy of source (quality and quantity). Include an explanation of raw water source, raw water intake structure, treatment plant capacity, and current level of production (WTP). Also describe the adequacy of Water Purchase Contract if applicable.

The District currently purchases water from the City of Harrodsburg and the South Anderson Water District. The District's contract with the City of Harrodsburg has forty (40) more years until maturity and the contract with South Anderson Water District has forty-five (45) years until maturity. The length of the these contracts ensures a consistent supply of potable water to the District's customers for the foreseeable future.

If the applicant purchases water:

Seller(s):

1. City of Harrodsburg

Price/1,000 gallons:

1. \$2.30

Seller(s):

2. South Anderson Water District

Price/1,000 gallons:

2. \$3.55

Present Estimated Market Value of Existing System: \$ 10,06,070.00

B. Water Storage:

Type: Ground Storage Tank \_\_\_\_\_ Elevated Tank 1  
Standpipe 4 Other \_\_\_\_\_  
Number of Storage Structures 5  
Total Storage Volume Capacity 988,000 Gallons  
Date Storage Tank(s) Constructed 1983, 1989 and 2017

C. Water Distribution System:

Pipe Material AC, PVC, Cast Iron  
Lineal Feet of Pipe: 2" & 3" Diameter 279,900 4" 764,850  
6" 644,900 8" 93,650  
10" 7,400 12" 600

All pipe footage is an estimate only.

Date(s) Water Lines Constructed 1960 – present  
Number and Capacity of Pump Station(s) 6; 2150 gpm

D. Condition of Existing Water System:

Briefly describe the condition and suitability for continued use of facility now owned by the applicant. Include any major renovation that will be needed within five to ten years.

The North Mercer Water District's system is currently in fair condition. Renovations/upgrades over the next five to ten years will continue to improve the older, undersized sections of the system and provide a safe, reliable source of drinking water to the customers.

E. Percentage of Water Loss Existing System 21%

IV. EXISTING LONG-TERM INDEBTEDNESS

A. List of Bonds and Notes:

<u>Date of Issue</u>	<u>Bond/Note Holder</u>	<u>Principal Balance</u>	<u>Payment Date</u>	<u>Bond Type Water/Sewer*</u>	<u>Amount on Deposit in Reserve Account</u>
<u>2011 Issue</u>	<u>USDA RD</u>	<u>\$1,874,000</u>	<u>Semi-Annual</u>	<u>100 % 3.75 %</u>	<u>    \$</u>
<u>2011 Issue</u>	<u>USDA RD</u>	<u>\$1,547,000</u>	<u>Semi-Annual</u>	<u>100 % 3.00 %</u>	<u>    \$</u>
<u>2010 Issue</u>	<u>KRWFC</u>	<u>\$1,790,000</u>	<u>Semi-Annual</u>	<u>100 % 2.20 %</u>	<u>    \$</u>
<u>2016 Issue</u>	<u>KRWFC</u>	<u>\$1,845,000</u>	<u>Semi-Annual</u>	<u>100 % 4.10 %</u>	<u>    \$</u>

\* If a combined issue, show attributable portion to each system.

B. Principal and Interest Payments: (Begin with Next Fiscal Year Payment)

<u>Date of Issue</u>	<u>Bond/Note Holder</u>	<u>Payment Year 2020</u>		<u>Payment Year 2021</u>		<u>Payment Year 2022</u>	
		<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Principal Payment</u>	<u>Interest Payment</u>
2011 Issue	USRD	29,000	64,575	30,000	63,487	31,000	62,362
2011 Issue	USRD	26,500	42,075	27,500	41,280	28,500	40,455
2010 Issue	KRWFC	106,000	37,740	111,000	33,304	114,500	33,389
2016 Issue	KRWFC	53,000	70,673	58,000	68,992	60,000	62,355
Total		<u>\$214,500</u>	<u>215,063</u>	<u>226,500</u>	<u>207,063</u>	<u>234,000</u>	<u>198,561</u>

V. EXISTING SHORT-TERM INDEBTEDNESS

A. List of All Short Term Debts: (Do Not Show Any Debt Listed in Paragraph IV Above)

<u>Lender or Lessor</u>	<u>Date of Issue (Month &amp; Year)</u>	<u>Principal Balance</u>	<u>Purpose (Water and/ or Sewer)</u>	<u>Payment Date</u>	<u>Principal &amp; Interest Payment (P&amp;I)</u>	<u>Date to Be Paid In Full</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

VI. LAND AND RIGHTS - EXISTING SYSTEM(S)

Number of Treatment Plant Sites:	Water	_____	Sewer	_____	<b>N/A</b>
Number of Storage Tank Sites	Water	_____	Sewer	_____	<b>N/A</b>
Number of Pump Stations:	Water	_____	Sewer	_____	<b>N/A</b>
Total Acreage:	Water	_____	Sewer	_____	<b>N/A Acres</b>
Purchase Price:	Water	\$ _____	Sewer	\$ _____	<b>N/A</b>

VII. NUMBER OF EXISTING USERS

	Water	Sewer
Residential (In Town) *	_____	_____
Residential (Out of Town) *	_____	_____
Non-Residential (In Town)	_____	_____
Non-Residential (Out of Town)	_____	_____
Total	_____	_____
Number to Total Potential Users Living in the Service Area	_____	_____

\*Note: Residential Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residence.

VIII. CURRENT WATER AND SEWER CONNECTION FEES FOR EACH SIZE WATER METER CONNECTION

<u>Meter Size</u>	<u>Water Connection Fee</u>	<u>Sewer Connection Fee</u>
5/8" x 3/4"	\$ 650.00 (Residential)	\$ <b>N/A</b>
_____	\$ _____	\$ <b>N/A</b>

IX. SEWER RATES - EXISTING SYSTEM

**N/A**

**Percentage of Water Bill** \_\_\_\_\_ % **Minimum Charge \$** \_\_\_\_\_

**Other: (If Charge Not Based on Water Bill)** \_\_\_\_\_

**Date This Rate Went Into Effect** \_\_\_\_\_

X. WATER RATES - EXISTING SYSTEM

Existing Rate Schedule:

<u>5/8" Meters</u>		
First 1,000	18.22	Minimum
Over 1,000	7.69	Per 1,000 gallons
<u>1" Meters</u>		
First 2,500	29.76	Minimum
Over 2,500	7.69	Per 1,000 gallons
<u>2" Meters</u>		
First 10,000	87.43	Minimum
Over 10,000	7.69	Per 1,000 gallons
<u>Bulk Sales</u>	.50	per 80 gallons

Date This Rate Went Into Effect May 19, 2017

XI. ANALYSIS OF ACTUAL WATER USAGE - EXISTING SYSTEM - 12 MONTH PERIOD

For Period 01/01/2019 to 12/31/2019.

ANALYSIS OF ACTUAL WATER USAGE - EXISTING SYSTEM									
MONTHLY WATER USAGE	Residential			Commercial			Bulk		
	Average	No. of Users	Usage 1,000	Average	No. of Users	Usage 1,000	Average	No. of Users	Usage 1,000
	<i>5/8" meter</i>								
0 - 1,000 Gal.	983	860	845	989	100	99			
1,000 & Over Gal.	4,268	3824	16,321	13,691	75	1,027			0
<i>1" meter</i>									
0 - 2,500 Gal.	1,988	4	8	2,250	2	5			
2,500 & Over Gal.	11,742	21	247	25,113	5	126			
<i>2" meter</i>									
0 - 10,000 Gal.	7,900	1	8	5,733	1	6			
10,000 & Over Gal.	59,542	1	60	37,168	3	112			
<i>Bulk Sales</i>							35	1	0.04
	<i>Subtotal</i>	4711	17,488		186	1,373		1	0.04
Average Monthly Usage			3,712			7,382			35
	<b>Totals</b>	<b>4711</b>	<b>17488</b>		<b>186</b>	<b>1373.027</b>		<b>1</b>	<b>0.035</b>
	Total Water Purchased and/or Produced					281,933,000			
	Total Water Sold (Gallons)					236,824,000			(226,335,000 Sales + 10,489,000 Leak Adjustment)



XV. FACILITY CHARACTERISTICS OF PROPOSED WATER SYSTEM

A. Water Source: Describe adequacy of source (quality and quantity). Include an explanation of raw water source, raw water intake structure, treatment plant capacity, and current level of production (WTP). Also describe the adequacy of Water Purchase Contract if applicable.

Water Supply described in Section III-A.

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B. Water Storage:

Type: Ground Storage Tank \_\_\_\_\_ Elevated Tank 1  
Standpipe 4 Other \_\_\_\_\_

Number of Storage Structures 5

Total Storage Volume Capacity 988,000

C. Water Distribution System:

Pipe Material PVC, AC, Cast Iron

Lineal Feet of Pipe: 3" Diameter 279,900 4" 764,850

6" 644,900 8" 93,650

10" 7,400 12" 600

Number and Capacity of Pump Station(s) 6; 2150 gpm

XVI. LAND AND RIGHTS - PROPOSED WATER SYSTEM

Number of Treatment Plant Sites 0

Number of Pump Sites 0

Number of Other Sites 0

Total Acreage 0 Acres

Purchase Price \$ 0

XIX. NUMBER OF NEW WATER USERS

Residential (In Town) *	<u>0</u>
Residential (Out of Town) *	<u>0</u>
Non-Residential (In Town)	<u>0</u>
Non-Residential (Out of Town)	<u>0</u>
Total	<u>0</u>
Number to Total Potential Users Living in the Service Area	<u>0</u>

\*Note: Residential Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residences.

XX. PROPOSED WATER CONNECTION FEES FOR EACH SIZE WATER METER CONNECTION:

<u>Meter Size</u>	<u>Connection Fee</u>
<u>5/8" x 3/4"</u>	<u>\$ 650.00</u>
<u>1 - Inch</u>	<u>\$ Actual Cost</u>
<u>1-1/2 Inch</u>	<u>\$ Actual Cost</u>
<u>2 - Inch</u>	<u>\$ Actual Cost</u>
<u>3 - Inch</u>	<u>\$</u>
<u>4 - Inch</u>	<u>\$</u>
<u>5 - Inch</u>	<u>\$</u>
<u>6 - Inch</u>	<u>\$</u>

XXII. WATER RATES - PROPOSED

A. Proposed Rate Schedule without RUS Grant:

<u>5/8" Meters</u>		
First 1,000	20.00	Minimum
Over 1,000	9.40	Per 1,000 gallons
<u>1" Meters</u>		
First 2,500	35.50	Minimum
Over 2,500	9.40	Per 1,000 gallons
<u>2" Meters</u>		
First 10,000	105.00	Minimum
Over 10,000	9.40	Per 1,000 gallons
Bulk Sales	.50	per 80 gallons

B. Recommended Rate Schedule with RUS Grant:

<u>5/8" Meters</u>		
First 1,000	19.31	Minimum
Over 1,000	8.15	Per 1,000 gallons
<u>1" Meters</u>		
First 2,500	31.55	Minimum
Over 2,500	8.15	Per 1,000 gallons
<u>2" Meters</u>		
First 10,000	92.68	Minimum
Over 10,000	8.15	Per 1,000 gallons
Bulk Sales	.50	per 80 gallons

XXV. FORECAST OF WATER USAGE - INCOME - EXISTING SYSTEM -EXISTING USERS

XXV. FORECAST OF WATER USAGE - INCOME - EXISTING SYSTEM															
MONTHLY WATER USAGE	AVERAGE			AVERAGE RATE			Residential			Commercial			Bulk		
	Residential	Commercial	Bulk	Residential	Commercial	Bulk	No. of Users	Usage 1,000	Income	No. of Users	Usage 1,000	Income	No. of Users	Usage 1,000	Income
	<i>5/8 x 3/4 meter</i>														
0 - 1,000 Gal.	983	989		\$ 20.00	\$ 20.00		860	845	17,200	100	99	2,000			
1,000 & Over Gal.	4,268	13,691		\$ 50.72	\$ 139.30		3824	16,321	193,950	75	1,027	10,447			
<i>1" meter</i>															
0 - 2,500 Gal.	1,988	2,250		\$ 35.50	\$ 35.50		4	8	142	2	5	71			
2,500 & Over Gal.	11,742	25,113		\$ 122.37	\$ 248.06		21	247	2,570	5	126	1,240			
<i>2" meter</i>															
0 - 10,000 Gal.	7,900	5,733		\$ 105.00	\$ 105.00		1	8	105	1	6	105			
10,000 & Over Gal.	59,542	37,168		\$ 570.69	\$ 360.38		1	60	571	3	112	1,081			
<i>Bulk</i>			35			\$ 0.02							1	0	219
<i>Sub-Total</i>							4,711	17,488	\$214,538	186	1,373	\$14,945	1	0	\$219
Average Monthly Rate				\$ 36.09											
Average Monthly Usage								3,712			7,382			35	
<b>Totals</b>							<b>4,711</b>	<b>17,488</b>	<b>\$214,538</b>	<b>186</b>	<b>1,373</b>	<b>\$14,945</b>	<b>1</b>	<b>0</b>	<b>\$ 219</b>

XXXVI. CURRENT OPERATING BUDGET - (WATER SYSTEM) -				Year Ending 2019
A.	Operating Income:			
	Water Sales			\$ 2,364,209
	Disconnect/Reconnect/Late Charge Fees/Customer Tap			\$ 71,814
	Other (Describe)			
	Less Allowances and Deductions			
	Total Operating Income			\$ 2,436,023
B.	Operation and Maintenance Expenses: (Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)			
	Operation Expense			\$ 1,341,572
	Maintenance Expense			
	Customer Accounts Expense			\$ 187,202
	Administrative and General Expense			\$ 352,209
	Total Operating Expenses			\$ 1,880,983
	Net Operating Income			\$ 555,040
C.	Non-Operating Income:			
	Interest on Deposits			\$ 10,659
	Other (Identify)	Rent		\$ 4,499
		Bond Issuance Costs		\$ (5,139)
	Total Non-Operating Income			\$ 10,019
D.	Net Income			\$ 565,059
E.	Debt Repayment:			
	RUS Interest			\$ 108,461
	RUS Principal			\$ 53,500
	Non-RUS Interest			\$ 112,189
	Non-RUS Principal			\$ 165,000
	Total Debt Repayment			\$ 439,150
F.	Balance Available for Coverage			\$ 125,909
	Short Lived Assets			
	Debt Reserve			
	Existing Debt Reserve			
	Balance Available			\$ 125,909
	Coverage Ratio			1.29

<b>XXXVII. PROPOSED OPERATING BUDGET - (WATER SYSTEM)</b>				
	(1st Full Year of Operation)			Year Ending 2022
	<b>WITHOUT GRANT</b>			
A.	Operating Income:			
	Water Sales			\$ 2,756,412
	Disconnect/Reconnect/Late Charge Fees			\$ 80,000
	Other (Describe)	customer tap fees		
	Less Allowances and Deductions			
	Total Operating Income			\$ 2,836,412
B.	Operation and Maintenance Expenses:			
	(Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)			
	Operation Expense			\$ 1,530,957
	Maintenance Expense			
	Customer Accounts Expense			\$ 213,629
	Administrative and General Expense			\$ 401,929
	Total Operating Expenses			\$ 2,146,515
	Net Operating Income			\$ 689,897
C.	Non-Operating Income:			
	Interest on Deposits			\$ 12,000
	Other (Identify)	Rent		\$ 4,500
	Total Non-Operating Income			\$ 16,500
D.	Net Income			\$ 706,397
E.	Debt Repayment:			
	RUS Interest			\$ 167,000
	RUS Principal			\$ 118,000
	Non-RUS Interest			\$ 95,744
	Non-RUS Principal			\$ 175,000
	Total Debt Repayment			\$ 555,744
F.	Balance Available for Coverage			\$ 150,653
	Short Lived Assets			\$ 75,000
	Debt Reserve			\$ 12,000
	Balance Available			\$ 63,653
	Coverage Ratio			1.27







