

SUMMARY ADDENDUM  
TO  
PRELIMINARY ENGINEERING REPORT

DATED March 2019

FOR

Western Mason Water District – Water System Improvements  
(Name of Project)

APPLICANT CONTACT PERSON David French, General Manager

APPLICANT PHONE NUMBER (606) 882-3141

APPLICANT TAX IDENTIFICATION NUMBER (TIN) 61-1088065

***ITEMS IN BOLD ITALIC PRINT ARE APPLICABLE TO SEWER SYSTEMS.***

In order to avoid unnecessary delays in application processing, the applicant and its consulting engineer should prepare a summary of the preliminary report in accordance with this Guide.

Please complete the applicable sections of the Summary Addendum. ***Please note, if water and sewer revenue will both be taken as security for the loan, all user information and characteristics of both utility systems will be needed even though the project will benefit only one utility.***

Feasibility reviews and grant determinations may be processed more accurately and more rapidly if the Summary/Addendum is submitted simultaneously with the preliminary engineering report, or as soon thereafter as possible.

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 upgrade and replace the transmission mains that serve many portions of the WMWD system. The majority of these transmission mains are of asbestos cement material and have been in service for over fifty 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 seven areas of replacement to be conducted, six of these will include improvement in pipe size. These six areas are somewhat centrally located in the WMWD distribution system around the city of Minerva. The WMWD system distributes water in many directions outwards from Dover and these improvements will allow for additional volume to be delivered while also improving water quality. The improvements will also allow WMWD to have additional contingencies to serve their customer base in the event of an emergency.

Additionally, the project will replace approximately 275 customer services that are older and are susceptible to various malfunctions due to the age. These replacements will include automatic meter reading equipment which in turn will help to reduce the District's overall operating expenses.

Lastly, should project funds be available the District will seek to conduct tank inspections and necessary repairs such as recoating of tank interiors. Some of the District's booster pump stations may also be retrofitted to utilized variable frequency drives (VFDs) and potential electrical configuration to allow for installation of emergency generators.

II. FACILITY CHARACTERISTICS OF EXISTING SEWER SYSTEM NA

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 raw water source are wells located near the Ohio River and are operated by the Western Mason Water District. The quantity and quality are adequate. The current WTP capacity is 0.750 MGD. The average production is approximately 0.350 MGD.

If the applicant purchases water:

Seller(s):

1. City of Maysville

Price/1,000 gallons:

1. \$2.34

Present Estimated Market Value of Existing System: \$ 6,494,612.00

B. Water Storage:

Type: Ground Storage Tank \_\_\_\_\_ Elevated Tank \_\_\_\_\_  
Standpipe \_\_\_\_\_ 4 \_\_\_\_\_ Other \_\_\_\_\_  
Number of Storage Structures \_\_\_\_\_ 4 \_\_\_\_\_  
Total Storage Volume Capacity \_\_\_\_\_ 490,000 Gallons \_\_\_\_\_  
Date Storage Tank(s) Constructed \_\_\_\_\_ 1988 and 2008 \_\_\_\_\_

C. Water Distribution System:

Pipe Material \_\_\_\_\_ AC, PVC, DI \_\_\_\_\_  
Lineal Feet of Pipe: 2" & 3" Diameter \_\_\_\_\_ 108,000 \_\_\_\_\_ 4" \_\_\_\_\_ 79,000 \_\_\_\_\_  
6" \_\_\_\_\_ 141,000 \_\_\_\_\_ 8" \_\_\_\_\_ 60,000 \_\_\_\_\_  
10" \_\_\_\_\_ 7,000 \_\_\_\_\_ 12" \_\_\_\_\_

All pipe footage is an estimate only.

Date(s) Water Lines Constructed \_\_\_\_\_ 1958 – present \_\_\_\_\_  
Number and Capacity of Pump Station(s) \_\_\_\_\_ 4; 1,490 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 Western Mason 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 \_\_\_\_\_ 7% \_\_\_\_\_

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>
1988 Issue	USDA RD	\$183,000	January (Annually)	100 % 5.75 %	\$
1997 Issue	USDA RD	\$142,000	January (Annually)	100 % 4.88 %	\$
2001 Issue	USDA RD	\$211,000	Semi-Annual	100 % 4.75 %	\$
2007 Issue	USDA RD	\$1,158,000	January (Annually)	100 % 4.375 %	\$
2007 Issue	USDA RD	\$243,000	January (Annually)	100 % 4.13 %	\$
2010 Issue	USDA RD	\$651,500	Semi-Annual	100 % 3.50 %	\$
2014	Bank Loan	\$64,273	January (Annually)	100 % 4.00 %	\$
2017	Bank Loan	\$43,566	January (Annually)	100 % 3.50 %	\$
2012 KIA	KIA Fund F	\$169,961	Semi-Annual	100 % 2.00 %	\$

\* 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 2019</u>		<u>Payment Year 2020</u>		<u>Payment Year 2021</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>
1988 Issue	USRD	13,000	9,833	14,000	9,085	15,000	8,280
1997 Issue	USRD	5,000	6,679	5,500	6,435	5,500	6,167
2001 Issue	USRD	5,000	9,809	5,000	9,571	5,500	9,334
2007 Issue	USRD	18,000	44,888	19,000	44,100	20,000	43,269
2007 Issue	USRD	4,000	8,818	4,000	8,652	4,500	8,487
2010 Issue	USRD	11,000	19,215	11,500	18,885	12,000	18,540
2014	Bank Loan	10,649	2,233	10,649	1,896	10,649	1,546
2017	Bank Loan	17,431	252				
2012 KIA	KIA Fund F	10,847	3,133	11,065	2,915	11,287	2,692
Total		<u>\$94,927</u>	<u>104,860</u>	<u>80,714</u>	<u>101,539</u>	<u>84,436</u>	<u>98,315</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 _____	<i>Sewer</i> _____
Number of Storage Tank Sites	Water <u>4</u>	<i>Sewer</i> _____
Number of Pump Stations:	Water <u>4</u>	<i>Sewer</i> _____
Total Acreage:	Water <u>10 Acres</u>	<i>Sewer</i> _____ <u>Acres</u>
Purchase Price:	Water \$ _____	<i>Sewer</i> \$ _____

VII. NUMBER OF EXISTING USERS

	Water	<i>Sewer</i>
Residential (In Town) *	_____	_____
Residential (Out of Town) *	<u>1,040</u>	_____
Non-Residential (In Town)	_____	_____
Non-Residential (Out of Town)	<u>16</u>	_____
Total	<u>1,056</u>	_____
Number to Total Potential Users Living in the Service Area	<u>1,250</u>	_____

\*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"	\$ 750.00 (Residential)	\$ _____
_____	\$ _____	\$ _____

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>All Users</u>		
first 2,000	39.82	minimum
next 8,000	5.79	per 1,000 gallons
over 10,000	5.07	per 1,000 gallons

Bulk Sales 6.10 per 1,000 gallons

Date This Rate Went Into Effect May 15, 2016

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

*For Period 01/01/2017 to 12/31/2017.*

**ANALYSIS OF ACTUAL WATER USAGE - EXISTING SYSTEM**

MONTHLY WATER USAGE	Residential			Commercial			Wholesale			Bulk		
	Average	No. of Users	Usage 1,000	Average	No. of Users	Usage 1,000	Average	No. of Users	Usage 1,000	Average	No. of Users	Usage 1,000
<i>5/8 x 3/4 meter</i>												
0 - 2,000 Gal.	989	328	324	1,950	5	10						
2,000 - 10,000 Gal.	4,143	634	2,627	4,862	6	29				100,471	2	201
10,000 & Over Gal.	12,172	78	949	57,225	5	286	838,333	1	838			
<b>Subtotal</b>	<b>1040</b>	<b>3,900</b>			<b>16</b>	<b>325</b>		<b>1</b>	<b>838</b>		<b>2</b>	<b>201</b>
<b>Average Monthly Usage</b>			<b>3,750</b>			<b>20,315</b>			<b>838,333</b>			<b>100,471</b>
<b>Totals</b>	<b>1040</b>	<b>3900.5</b>			<b>16</b>	<b>325.047</b>		<b>1</b>	<b>838.33</b>		<b>2</b>	<b>200.94</b>
Total Water Purchased and/or Produced						<u>90,725,000</u>						
Total Water Sold (Gallons)						<u>80,965,000</u>	63,177,504 (water) + 17,787,496 (sewer)					



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.

B. Water Storage:

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

Number of Storage Structures 4

Total Storage Volume Capacity 490,000

C. Water Distribution System:

Pipe Material PVC, AC, DI

Lineal Feet of Pipe: 3" Diameter 108,000 4" 79,000

6" 141,000 8" 60,000

10" 7,000 12" \_\_\_\_\_

Number and Capacity of Pump Station(s) 4; 1490 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>\$ 750.00</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>All Users</u>		
first 2,000	45.79	minimum
next 8,000	6.66	per 1,000 gallons
over 10,000	5.83	per 1,000 gallons

<u>Bulk Sales</u>	7.02	per 1,000 gallons
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The above proposed rate, without RUS grant, must be completed for each grant. If the applicant/engineer desires, there is no objection to recommending a proposed rate with an estimated RUS grant in the Table below. However, the preparer should remember that the Table (A) above must be completed prior to Table (B).

B. Recommended Rate Schedule with RUS Grant:

<u>All Users</u>		
first 2,000	44.60	minimum
next 8,000	6.48	per 1,000 gallons
over 10,000	5.68	per 1,000 gallons

<u>Bulk Sales</u>	6.83	per 1,000 gallons
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XXV.  
USERS

FORECAST OF WATER USAGE - INCOME - EXISTING SYSTEM - EXISTING

XXV. FORECAST OF WATER USAGE - INCOME - EXISTING SYSTEM

MONTHLY WATER USAGE	AVERAGE				AVERAGE RATE				Residential		Commercial		Wholesale		Bulk					
	Residential	Commercial	Wholesale	Bulk	Residential	Commercial	Wholesale	Bulk	No. of Users / 1,000	Usage / 1,000	Income	No. of Users / 1,000	Usage / 1,000	Income	No. of Users / 1,000	Usage / 1,000	Income			
5/8 x 3/4 meter																				
0 - 2,000 Gal.	989	1,990			\$ 44.60	\$ 44.60			328	324	14,629	5	5	223						
2,000 - 10,000 Gal.	4,143	4,962			\$ 58.49	\$ 63.15			634	2,627	37,081	6	25	379						
10,000 Gal. & Over	12,172	57,225	838,333		\$ 109.71	\$ 401.66			78	949	8,558	5	61	2,008	1	838	1,115			
Bulk				100,471			\$686.22								2	201	1,372			
Sub-Total									1,040	3,900	\$60,267	16	91	\$2,610	1	838	\$1,115	2	201	\$1,372
Average Monthly Rate					\$ 55.94															
Average Monthly Usage										3,750		5,666		838,333		100,471				
Totals									1,040	3,900	\$60,267	16	91	\$2,610	1	838	\$1,115	2	201	\$1,372

**XXXVI. CURRENT OPERATING BUDGET - (WATER SYSTEM) -**

Year Ending 2017

A.	Operating Income:		
	Water Sales	\$	699,093
	Disconnect/Reconnect/Late Charge Fees	\$	23,931
	Other (Describe) customer tap fees	\$	4,500
	Less Allowances and Deductions		
	Total Operating Income	\$	<u>727,524</u>
B.	Operation and Maintenance Expenses: (Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)		
	Operation Expense	\$	427,124
	Maintenance Expense	\$	30,488
	Customer Accounts Expense		
	Administrative and General Expense	\$	44,236
	Total Operating Expenses	\$	<u>501,848</u>
	Net Operating Income	\$	<u>225,676</u>
C.	Non-Operating Income:		
	Interest on Deposits	\$	8
	Other (Identify) Sewer Billing Fees	\$	11,940
	Gain (loss) on disposal of assets	\$	(920)
	Total Non-Operating Income	\$	<u>11,028</u>
D.	Net Income	\$	<u>236,704</u>
E.	Debt Repayment:		
	RUS Interest	\$	84,776
	RUS Principal	\$	53,500
	Non-RUS Interest	\$	7,553
	Non-RUS Principal	\$	18,650
	Total Debt Repayment	\$	<u>164,479</u>
F.	Balance Available for Coverage	\$	<u>72,225</u>
	Short Lived Assets		
	Debt Reserve		
	Existing Debt Reserve	\$	<u>19,509</u>
	Balance Available	\$	<u>52,716</u>
	Coverage Ratio		<u>1.44</u>

**XXXVII. PROPOSED OPERATING BUDGET - (WATER SYSTEM)**

	(1st Full Year of Operation)	Year Ending 2021
A.	Operating Income:	
	Water Sales	\$ 784,368
	Disconnect/Reconnect/Late Charge Fees	\$ 25,000
	Other (Describe) customer tap fees	\$ 4,000
	Less Allowances and Deductions	
	Total Operating Income	\$ 813,368
B.	Operation and Maintenance Expenses: (Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)	
	Operation Expense	\$ 462,333
	Maintenance Expense	\$ 33,001
	Customer Accounts Expense	
	Administrative and General Expense	\$ 47,882
	Total Operating Expenses	\$ 543,216
	Net Operating Income	\$ 270,152
C.	Non-Operating Income:	
	Interest on Deposits	\$ 10
	Other (Identify) Sewer Billing Fees	\$ 11,940
	Gain (loss) on disposal of assets	
	Total Non-Operating Income	\$ 11,950
D.	Net Income	\$ 282,102
E.	Debt Repayment:	
	RUS Interest	\$ 138,377
	RUS Principal	\$ 81,200
	Non-RUS Interest	\$ 4,238
	Non-RUS Principal	\$ 20,390
	Total Debt Repayment	\$ 244,205
F.	Balance Available for Coverage	\$ 37,897
	Short Lived Assets	\$ 20,000
	Debt Reserve	\$ 6,300
	Balance Available	\$ 11,597
	Coverage Ratio	1.16



**WMWD Water System Improvements  
Summary Addendum  
Funding Option 1 - 40 year Payback Schedule with Grant  
First Year of Operation - Year Ending in 2021**

<b>Total Project Cost</b>		<b>\$2,019,710</b>
<b>Proposed Funding</b>		
RD Grant Funds		\$504,928
Proposed Bond Amount		\$1,514,783
<b>Proposed Debt Service</b>		
RD Loan Annual Debt Service (First 2 years of 40 year loan are deferred) 40 years @ 3.25%		\$68,300
RD Loan Debt Service Coverage (10% of Annual Debt Service)		\$6,830
<i>Total New Project Debt Service</i>		<b>\$75,130</b>
<b>Additional Expenses &amp; Anticipated Debt Service</b>		
Estimated Annual O & M Increase		\$41,368
Short-Lived Assets		\$20,000
Debt Reserve		\$19,509
		+
<i>Total Additional Expenses &amp; Anticipated Debt Service</i>		<b>\$80,877</b>
Total Annual Increase (Total New Project Debt Service + Total Additional Expenses)		\$156,007
Balance Available for Coverage (For Planned & Ongoing Immediate Projects)		- \$72,225
<b>Total Additional Annual Revenue Required</b>		<b>\$83,782</b>
Total Additional Annual Revenue Required		\$83,782
Total 2017 Billed Water Revenue		+ \$699,093
<i>Percentage Rate Increase</i>		<b>12.00%</b>

<i>In Gallons</i>	<b>2018 Existing Rates</b>	<b>Proposed Rates</b>
First 2,000	\$39.82	<b>\$44.60</b>
Next 8,000	\$5.79	<b>\$6.48</b>
over 10,000	\$5.07	<b>\$5.68</b>
Bulk Sales	\$6.10	<b>\$6.83</b>



**WMWD Water System Improvements  
Summary Addendum  
Funding Option 2 - 40 year Payback Schedule with no Grant  
First Year of Operation - Year Ending in 2020**

<b>Total Project Cost</b>	<b>\$2,019,710</b>
<b>Proposed Funding</b>	
RD Grant Funds	\$0
Proposed Bond Amount	\$1,865,470
<b>Proposed Debt Service</b>	
RD Loan Annual Debt Service (First 2 years of 40 year loan are deferred) 40 years @ 3.25%	\$84,000
RD Loan Debt Service Coverage (10% of Annual Debt Service)	\$8,400
<i>Total New Project Debt Service</i>	<b>\$92,400</b>
<b>Additional Expenses &amp; Anticipated Debt Service</b>	
Estimated Annual O & M Increase	\$41,368
Short-Lived Assets	\$20,000
Debt Reserve	\$19,509
	+
<i>Total Additional Expenses &amp; Anticipated Debt Service</i>	<b>\$80,877</b>
Total Annual Increase (Total New Project Debt Service + Total Additional Expenses)	\$173,277
Balance Available for Coverage (For Planned & Ongoing Immediate Projects)	-\$72,225
<b>Total Additional Annual Revenue Required</b>	<b>\$101,052</b>
Total Additional Annual Revenue Required	\$101,052
Total 2017 Billed Water Revenue	÷ \$699,093
<b>Percentage Rate Increase</b>	<b>15.00%</b>

<i>In Gallons</i>	<b>2018 Existing Rates</b>	<b>Proposed Rates</b>
First 2,000	\$39.82	\$45.79
Next 8,000	\$5.79	\$6.66
over 10,000	\$5.07	\$5.83
Bulk Sales	\$6.10	\$7.02