#### **SUMMARY ADDENDUM**

TO

#### PRELIMINARY ENGINEERING REPORT

Dated April 30, 2020

FOR THE

# **South Logan Water Association**

# Water Office & Russellville Southern Bypass Extension

(Name of Water Facility Project)

Applicant Contact Person	Chris Wilcutt, P.E.
Applicant Phone Number	(270) 483-9985
Applicant Tax ID Number (TIN)	61-1073892

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

#### General

<u>Proposed Project:</u> 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 showing the following:

The South Logan water system is comprised of over 210 miles of water distribution lines and three water storage tanks with a total capacity of 736,000 gallons, all of which serves approximately 1,735 customers in southern Logan County. As of the end of March 2003, the South Logan Water Association began to purchase all of their treated water from the recently completed water system of the Logan Todd Regional Water Commission (LTRWC). The Commission's water treatment facility is rated at 10 million gallons per day, and their distribution system consists of nearly 85 miles of pipeline and three storage tanks totaling 3,500,000 gallons in capacity. The 2019 average daily LTRWC usage within the South Logan system was approximately 405,000 gallons per day. South Logan has two meter stations with the Commission, one located in Russellville and the other near the Mortimer community. The Association is a relatively large water system covering nearly a third of the Logan County area. Almost all roads within the Association boundary have water service, with only short extensions needed from time to time to accommodate new development. Over the past 25+ years, the main problems that plaqued the Association were associated with its long-term supply of treated water, low pressure in certain areas of the system, extending water service to unserved areas, and installing lines for improved hydraulic performance. Going online with the Logan Todd Regional system and multiple USDA funded upgrade projects have resolved the majority of these problems. However, the growth of the community and water system have created two new critical needs for the Association.

First, the Russellville Southern Bypass opened for traffic in late 2017. This new southern bypass section runs from US Highway 79 to KY Highway 100, crossing KY Highway 96 along the way. It is 4.5 miles long, featuring a two lane roadway with turning lanes at intersections and a truck climbing lane. Cost for the project was \$12,824,639. The proximity of this new roadway to Russellville, with a majority resting in the Association's service territory, created a major unserved corridor. Second, the Association has experienced a customer growth of nearly 50% in the past 25 years (1,160 total customers in 1993). This dramatic growth has created an expanding need in both customer service and system operations. South Logan has outgrown their current office facilities for fulfilling these services, and their present facility has been labeled by USDA as being non-compliant with ADA requirements. To initiate a solution to alleviating these needs, the South Logan Water Association has requested funding assistance to undertake their Water Office & Southern Bypass Extension Project. The proposed project includes construction of over 3 miles of 8-inch waterline along the Russellville Southern Bypass to provide water service to the unserved area. Also, the project will include construction of a new water office to better serve their expanding customer base and provide ample space for meeting, operations, and bathroom facilities; all within ADA compliance. The total cost of the proposed project is estimated to be \$1,065,000.

#### II. 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.

As of the end of March 2003, the South Logan Water Association began to purchase all of their treated water under an agreement with the recently completed water system of the Logan Todd Regional Water Commission (LTRWC). The Commission's water treatment facility is rated at 10 million gallons per day, and their distribution system consists of nearly 85 miles of pipeline and three storage tanks totaling 3,500,000 gallons in capacity. South Logan has two meter stations with the Commission, one located in Russellville and the other near the Mortimer community. The Commission's plant is rated at 10.0 MGD, and raw water for the plant is obtained in Clarksville, Tennessee from the Cumberland River. At the end of 2019, the plant was operating at approximately 43%, however, the plant's utilization increased significantly this month as the City of Springfield, Tennessee came online with the Commission.

	If the a	pplicant purchases water:  Sellers: Logan Todd Regional Water Commission  Price/1,000 gallons: \$3.91 (as of April 1, 2020)					
B.	Water	Storage:					
	Type:	Ground Storage Tank X . Elevated Tank X . Standpipe Other					
	Numbe	er of Storage Structures1 ground, 2 elevated					
	Total S	torage Volume Capacity 736,000 gallons					
	Date S	torage Tank(s) Constructed <u>1994, 1998, &amp; 2006</u>					
C.		Distribution System: aterial PVC with minimal DIP amounts					
	•	Feet of Pipe: 3" Diameter and smaller: ~301,500; 4": ~443,500; 6": ~269,300;					
8": <u>~71,300;</u> 10" <u>~23,800</u>							
	Date(s)	of Major Water Lines Construction 1977, '79, '85, '93. '98, 2003 & 2011					
	Numbe	er, and Capacity of Pump Station(s): 1 - 265 gpm Booster for filling the					
	Schock	noh water tank.					

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 system is well managed and generally in good repair. Although isolated areas of substandard pipe may be replaced from time to time, no critical renovations are anticipated in the near future. Over the past several years, the Association has aggressively pursued various extension projects to meet the needs of rural residences using superior materials to insure an adequate working system and leaving primarily no areas unserved.

E. Percentage of Water Loss in the Existing System: <u>18.90% (Per FYE '19 PSC Report)</u>

Present Estimated Market Value of Existing System \*: \$4,607,962 \* = Based on Depreciated Value of 2019 Financial Statement

#### III. EXISTING LONG-TERM INDEBTEDNESS

A. List of Bonds and Notes: per 2019 Financial Statement

							Αn	nount on		
Date	Bond/Note		Principal	F	Payment	Bond	De	eposit in		
of Issue	Holder		Balance		Balance		Date	Type	Re	eserve *
1993 Issue	FmHA	\$	207,743		2033	Water	\$	92,477		
1998 Issue	FmHA	\$	408,390		2038	Water				
2005 Issue	USDA-RD	\$	645,025		2045	Water				
2013 Issue	USDA-RD	\$	1,123,725		2053	Water				

\*NOTE: Total of Debt Service - Bonds Accounts

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

		Payment Year		Payment Year		Payment Year	
		20	21	2022		2023	
Date	Bond/Note	Principal	Interest	Principal	Interest	Principal	Interest
of Issue	<u>Holder</u>	<u>Payment</u>	<u>Payment</u>	<u>Payment</u>	<u>Payment</u>	<u>Payment</u>	<u>Payment</u>
1993 Issue	FmHA						
1998 Issue	FmHA						
2005 Issue	USDA-RD						
2013 Issue	USDA-RD						
		\$63,311	\$87 309	\$65,737	\$84 764	\$68 245	\$82 116

\*NOTE: Approximate - No Amortization Chart readily available.

#### IV. EXISTING SHORT-TERM INDEBTEDNESS

A. List of All Short Term Debts: per 2019 Financial Statement

	Date				Principal	Date to
Lender	of Issue	Principal		Payment	& Interest	Be Paid
or Lessor	(Mo. & Year)	Balance	Purpose	Date	Payment (P&I)	In Full
NA	NA	\$ -		NA	\$0	

#### V. LAND AND RIGHTS - EXISTING SYSTEM:

Number of Treatment Plant Sites	0
Number of Storage Tank Sites	3
Number of Pump Stations	1
Total Acreage	<5 Ac.
Purchase Price*	\$36,719 *Land & ROW value per 2009 Audit

#### VI. NUMBER OF EXISTING USERS

A. Water Users (year end totals per 2019 PSC audit):

> Residential Size Meters (In Town)\* Residential Size Meters/Farmers (Out of Town)\* 1,678 Commercial Users & Resellers (In Town) Commercial Users & Resellers (Out of Town) 57 Total 1,735 Number of Total potential Users in the Service Area <50 (Est.)

\*NOTE: Residential/Farmers Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residence size meters and farmers.

#### VII. CURRENT CONNECTION FEES FOR EACH SIZE METER CONNECTION

Date these charges went into effect: November 5, 2008 .

			Minimum Water Usa	ge for Each
Meter Size	Con	onnection Fee Size Meter		r
5/8 x 3/4"	\$	800.00	2,000	gallons
1 - Inch	\$	1,100.00	2,000	gallons
1-1/2" Inch	\$	1,350.00	2,000	gallons
2 - Inch	\$	1,900.00	2,000	gallons
3 - inch & up		At Cost	2,000	gallons

#### VIII. WATER RATES - EXISTING RATE SCHEDULE

March 1, 2014 . Date this rate went into effect:

Meter Size 5/8x3/4 Inch :

Gallons @ \$ 23.89 First 2,000 Minimum \$ Next 8,000 Gallons @ 8.52 per 1,000 Gallons Next 40,000 Gallons @ \$ 8.25 per 1,000 Gallons Next 50,000 Gallons @ \$ 7.97 per 1,000 Gallons All Over 100,000 Gallons @ 7.70 per 1,000 Gallons

Meter Size 1-Inch:

First 2,000 Gallons @ \$ 43.90 Minimum Next 8,000 Gallons @ \$ 8.52 per 1,000 Gallons 40,000 Gallons @ \$ 8.25 per 1,000 Gallons Next Next 50,000 Gallons @ \$ 7.97 per 1,000 Gallons All Over Gallons @ \$ 7.70 per 1,000 Gallons 100,000

Meter Size	1 1/2-Inch	<u>:</u>			
	First	2,000	Gallons @	\$ 61.88	Minimum
	Next	8,000	Gallons @	\$ 8.52	per 1,000 Gallons
	Next	40,000	Gallons @	\$ 8.25	per 1,000 Gallons
	Next	50,000	Gallons @	\$ 7.97	per 1,000 Gallons
	All Over	100,000	Gallons @	\$ 7.70	per 1,000 Gallons
Meter Size	2-Inch :				
	First	2,000	Gallons @	\$ 94.41	Minimum
	Next	8,000	Gallons @	\$ 8.52	per 1,000 Gallons
	Next	40,000	Gallons @	\$ 8.25	per 1,000 Gallons
	Next	50,000	Gallons @	\$ 7.97	per 1,000 Gallons
	All Over	100,000	Gallons @	\$ 7.70	per 1,000 Gallons
Meter Size	3-Inch :				
	First	2,000	Gallons @	\$ 126.51	Minimum
	Next	8,000	Gallons @	\$ 8.52	per 1,000 Gallons
	Next	40,000	Gallons @	\$ 8.25	per 1,000 Gallons
	Next	50,000	Gallons @	\$ 7.97	per 1,000 Gallons
	All Over	100,000	Gallons @	\$ 7.70	per 1,000 Gallons
Meter Size	4-Inch :				
	First	2,000	Gallons @	\$ 163.21	Minimum
	Next	8,000	Gallons @	\$ 8.52	per 1,000 Gallons
	Next	40,000	Gallons @	\$ 8.25	per 1,000 Gallons
	Next	50,000	Gallons @	\$ 7.97	per 1,000 Gallons
	All Over	100,000	Gallons @	\$ 7.70	per 1,000 Gallons

#### IX. ANALYSIS OF ACTUAL WATER USAGE - EXISTING SYSTEM - 12 MONTH PERIOD For Period January 1, 2019 to December 31, 2019.

					1	Non-
Meter	MONTHLY		Resi	dential/	Res	idential/
Size	MONTHLY WATER USAGE	Average	Fa	ırmer	Com	nmercial
			No. of	Usage	No. of	Usage
			Users	Gallons	Users	Gallons
	0 Gal.	0	866	0	60	0
	1 - 2,000 Gal.	500	5,748	5,720,130	223	141,950
	2,000 - 3,000 Gal.	1,500	3,477	8,722,740	47	119,390
	3,000 - 4,000 Gal.	2,500	2,969	10,351,270	38	133,230
	4,000 - 5,000 Gal.	3,500	2,279	10,224,100	28	126,000
	5,000 - 6,000 Gal.	4,500	1,461	8,000,580	25	135,420
	6,000 - 7,000 Gal.	5,500	926	5,989,520	16	107,070
	7,000 - 8,000 Gal.	6,500	571	4,265,010	6	45,660
	8,000 - 9,000 Gal.	7,500	358	3,033,390	5	43,000
	9,000 - 10,000 Gal.	8,500	243	2,294,340	5	47,160
All Sizes	10,000 - 11,000 Gal.	9,500	164	1,723,320	9	94,530
	11,000 - 12,000 Gal.	10,500	120	1,377,650	8	92,760
	12,000 - 13,000 Gal.	11,500	96	1,202,020	6	75,000
	13,000 - 14,000 Gal.	12,500	67	903,190	2	26,390
	14,000 - 15,000 Gal.	13,500	64	926,860	4	57,860
	15,000 - 16,000 Gal.	14,500	58	897,690	3	47,080
	16,000 - 17,000 Gal.	15,500	53	873,200	6	99,180
	17,000 - 18,000 Gal.	16,500	47	824,830	1	17,100
	18,000 - 19,000 Gal.	17,500	36	666,370	4	74,470
	19,000 - 20,000 Gal.	18,500	28	548,770	2	38,800
	20,000 - 50,000 Gal.	19,500	289	8,344,220	91	3,007,920
	50,000 - 100,000 Gal.	35,000	64	4,634,360	39	2,830,600
	100,000 - 200,000 Gal.	75,000	42	5,526,610	28	3,943,600
	over 200,000 Gal.	150,000	2	658,720	30	14,105,200
		Varies				
	·	Sub-Total	20,028	87,708,890	<u>686</u>	25,409,370
	Average Count (Me	eter Type)	<u>1,669</u>	•	<u>57</u>	•
	Average Usage		<u>4,379</u>		<u>37,040</u>	
		Total	20,028	87,708,890	686	25,409,370
	Total Water Purchased per '19	PSC Repor	147,9	932,000 G	allons	
	Total Water Sold per 12 Month	Forecast	113,	118,260 G	allons	

#### Χ. 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.

The recommended project provides water service along a new major thoroughfare in Russellville. Also, the project provides a solution to South Logan's limited operational space for customer service, meetings, material storage, and general maintenance operations. The project involves construction of over 3 miles of water line along an unserved roadway in the Russellville area. The line is being built to provide water

water system that will improve the hydraulic performance of the existing distribution system. The loop will offer alternate feed options and backdoor supply during interruptions in the older, original portions of the South Logan System in southern Russellville. In a further attempt to improve service to customers, South Logan is also proposing to construct a new water office and operational headquarters. Although the final selection of a site is yet to be determined, the Association intends to provide a facility with secure entry for payment transactions with staff, drive-thru window options, expanded meeting space for public participation at monthly board meetings, plus ADA compliant access and restroom facilities. The Association will continue to purchase all of its water from the Logan Todd Regional Water Commission, which has adequate capacity to serve the new customers resulting from the proposed project.

	B.	Water Storage:	
		Type: Ground Storage Tank Elevated Tank	
		Standpipe Other	
		Number of Storage Structures	
		Total Storage Volume Capacity	
	C.	Water Distribution System:	
		Pipe Material PVC	
		Lineal Feet of Pipe: 3" Diameter:; 4":; 6": _	
		8": <u>16,000</u> ; 10"	<u>:</u>
		Number, and Capacity of Pump Station(s):	
XI.	LAND	AND RIGHTS - PROPOSED WATER SYSTEM(S)	
Λι.		er of Treatment Plant Sites0	
		er of Pump Sites	
		er of Other Sites (Water Office)1	
		Acreage	
		ase Price ~\$25,000	
XII.	NUME	BER OF NEW USERS	
	A.	Water Users:	
		Residential Size Meters (In Town)*	
		Residential Size Meters/Farmers (Out of Town)* 0 Initial	lly
		Commercial Users & Resellers (In Town)	
		Commercial Users & Resellers (Out of Town) 0 Initial	<u>lly</u>
		Total0	
		Number of Total potential Users in the Service Area 50 (Est	i.)

<sup>\*</sup>NOTE: Residential/Farmers Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residence size meters and farmers.

### XIII. PROPOSED CONNECTION FEES FOR EACH SIZE METER CONNECTION

\* NOTE: No connection fee increase is expected as a result of this project.

			Minimum Water Usa	ge for Each	
Meter Size	Con	nection Fee	Size Meter		
5/8 x 3/4"	\$	800.00	2,000	gallons	
1 - Inch	\$	1,100.00	2,000	gallons	
1-1/2" Inch	\$	1,350.00	2,000	gallons	
2 - Inch	\$	1,900.00	2,000	gallons	
3 - inch & up		At Cost	2,000	gallons	

### XIV. WATER RATES - PROPOSED

A. <u>Estimated</u> Rate Schedule to account for <u>Upcoming Purchase Water Adjustment</u>:

Meter Size	5/8x3/4 Inch	:	<u> </u>		
			<b>0</b> "	Φ 00.45	
	First	2,000	· —	\$ 22.45	Minimum
	Next	8,000	_	\$ 7.80	per 1,000 Gallons
	Next	40,000	·	\$ 7.53	per 1,000 Gallons
	Next	50,000	· —	\$ 7.25	per 1,000 Gallons
	All Over	100,000	Gallons @ _	\$ 6.98	per 1,000 Gallons
Meter Size _	1-Inch :				
	First	2,000	Gallons @ _	\$ 42.46	Minimum
	Next	8,000	Gallons @ _	\$ 7.80	per 1,000 Gallons
	Next	40,000	Gallons @	\$ 7.53	per 1,000 Gallons
	Next	50,000	Gallons @	\$ 7.25	per 1,000 Gallons
	All Over	100,000	Gallons @ _	\$ 6.98	per 1,000 Gallons
Meter Size	1 1/2-Inch	<u>:</u>			
	First	2,000	Gallons @	\$ 60.44	Minimum
	Next	8,000	Gallons @ _	\$ 7.80	per 1,000 Gallons
	Next	40,000	Gallons @ _	\$ 7.53	per 1,000 Gallons
	Next	50,000	Gallons @ _	\$ 7.25	per 1,000 Gallons
	All Over	100,000	Gallons @ _	\$ 6.98	per 1,000 Gallons
Meter Size _	2-Inch :				
	First	2,000	Gallons @	\$ 92.97	Minimum
	Next	8,000	Gallons @ _	\$ 7.80	per 1,000 Gallons
	Next	40,000	Gallons @ _	\$ 7.53	per 1,000 Gallons
	Next	50,000	Gallons @ _	\$ 7.25	per 1,000 Gallons
	All Over	100,000	Gallons @ _	\$ 6.98	per 1,000 Gallons
Meter Size	3-Inch :				
	First	2,000	Gallons @ _	\$ 125.07	Minimum
	Next	8,000	Gallons @ _	\$ 7.80	per 1,000 Gallons
	Next	40,000	Gallons @	\$ 7.53	per 1,000 Gallons
	Next	50,000	Gallons @	\$ 7.25	per 1,000 Gallons
	All Over	100,000	Gallons @ _	\$ 6.98	per 1,000 Gallons

Meter Size 4-Inch :			
First	2,000	Gallons @ \$ 161.77	Minimum
Next	8,000	Gallons @ \$ 7.80	per 1,000 Gallons
Next	40,000	Gallons @ \$ 7.53	per 1,000 Gallons
Next	50,000	Gallons @ \$ 7.25	per 1,000 Gallons
All Over	100,000	Gallons @ \$ 6.98	per 1,000 Gallons
B. <u>Proposed</u> Rate Sch	edule witho	ut RUS Grant:	
Meter Size <u>5/8x3/4 Inch</u>	<u>:</u>		
First	2,000	Gallons @ \$ 24.25	Minimum
Next	8,000	Gallons @ \$ 8.42	per 1,000 Gallons
Next	40,000	Gallons @ \$ 8.13	per 1,000 Gallons
Next	50,000	Gallons @ \$ 7.83	per 1,000 Gallons
All Over	100,000	Gallons @ \$ 7.54	per 1,000 Gallons
Meter Size 1-Inch :			
First	2,000	Gallons @ \$ 45.86	Minimum
Next	8,000	Gallons @ \$ 8.42	per 1,000 Gallons
Next	40,000	Gallons @ \$ 8.13	per 1,000 Gallons
Next	50,000	Gallons @ \$ 7.83	per 1,000 Gallons
All Over	100,000	Gallons @ \$ 7.54	per 1,000 Gallons
Meter Size 1 1/2-Inch	<u>:</u>		
First	2,000	Gallons @ \$ 65.28	Minimum
Next	8,000	Gallons @ \$ 8.42	per 1,000 Gallons
Next	40,000	Gallons @ \$ 8.13	per 1,000 Gallons
Next	50,000	Gallons @ \$ 7.83	per 1,000 Gallons
All Over	100,000	Gallons @ \$ 7.54	per 1,000 Gallons
Meter Size 2-Inch :			
First	2,000	Gallons @ \$100.41	Minimum
Next	8,000	Gallons @ \$ 8.42	per 1,000 Gallons
Next	40,000	Gallons @ \$ 8.13	per 1,000 Gallons
Next	50,000	Gallons @ \$ 7.83	per 1,000 Gallons
All Over	100,000	Gallons @ \$ 7.54	per 1,000 Gallons
Meter Size 3-Inch :			
First	2,000	Gallons @ _ \$ 135.08	Minimum
Next	8,000	Gallons @ \$ 8.42	per 1,000 Gallons
Next	40,000	Gallons @ \$ 8.13	per 1,000 Gallons
Next	50,000	Gallons @ \$ 7.83	per 1,000 Gallons
All Over	100,000	Gallons @ \$ 7.54	per 1,000 Gallons

Meter Size	4-Inch :				
	First	2,000	Gallons @ \$	174.71	Minimum
	Next	8,000	Gallons @ \$	8.42	per 1,000 Gallons
	Next	40,000	Gallons @ \$	8.13	per 1,000 Gallons
	Next	50,000	Gallons @ \$	7.83	per 1,000 Gallons
	All Over	100,000	Gallons @ \$	7.54	per 1,000 Gallons
				•	•
C. Rec	ommended Rate	e Schedule	with RUS Grant:	:	
Meter Size	5/8x3/4 Inch	<u>:</u>			
	First	2,000	Gallons @ _\$	24.02	Minimum
	Next	8,000	Gallons @ \$	8.35	per 1,000 Gallons
	Next	40,000	Gallons @ \$	8.06	per 1,000 Gallons
	Next	50,000	Gallons @ \$	7.76	per 1,000 Gallons
	All Over	100,000	Gallons @ \$	7.47	per 1,000 Gallons
Meter Size	1-Inch :				
	First	2,000	Gallons @ \$	45.43	Minimum
	Next	8,000	Gallons @ \$	8.35	per 1,000 Gallons
	Next	40,000	Gallons @ \$	8.06	per 1,000 Gallons
	Next	50,000	Gallons @ \$	7.76	per 1,000 Gallons
	All Over	100,000	Gallons @ \$	7.47	per 1,000 Gallons
Meter Size	1 1/2-Inch	<u>:</u>			
	First	2,000	Gallons @ \$	64.67	Minimum
	Next	8,000	Gallons @ \$	8.35	per 1,000 Gallons
	Next	40,000	Gallons @ \$	8.06	per 1,000 Gallons
	Next	50,000	Gallons @ \$	7.76	per 1,000 Gallons
	All Over	100,000	Gallons @ \$	7.47	per 1,000 Gallons
Meter Size	2-Inch :				
	First	2,000	Gallons @ \$	99.48	Minimum
	Next	8,000	Gallons @ \$	8.35	per 1,000 Gallons
	Next	40,000	Gallons @ \$	8.06	per 1,000 Gallons
	Next	50,000	Gallons @ \$	7.76	per 1,000 Gallons
	All Over	100,000	Gallons @ \$	7.47	per 1,000 Gallons
Meter Size	3-Inch :				
	First	2,000	Gallons @ \$	133.82	Minimum
	Next	8,000	Gallons @ \$	8.35	per 1,000 Gallons
	Next	40,000	Gallons @ \$	8.06	per 1,000 Gallons
	Next	50,000	Gallons @ \$	7.76	per 1,000 Gallons
			<b>-</b> <del>-</del>	`	

All Over

7.47

per 1,000 Gallons

100,000 Gallons @ \$

Meter Size 4-Inch First 2,000 Gallons @ \$ 173.09 Minimum Gallons @ \$ Next 8,000 8.35 per 1,000 Gallons 40,000 Gallons @ 8.06 per 1,000 Gallons Next Next 50,000 Gallons @ \$ 7.76 per 1,000 Gallons All Over 100,000 Gallons @ \$ 7.47 per 1,000 Gallons

# XV. <u>FORECAST OF WATER USAGE - INCOME - EXISTING SYSTEM - EXISTING USERS – EXISTING RATES</u> For Period <u>January 1, 2019</u> to <u>December 31, 2019.</u>

Notes: 5/8-inch Meter Rate Block is utilized for Forecast of Water Usage.

Meter	MONTHLY			Residentia	al						Commerc	ial		
Size	WATER USAGE	Customers						Customers						
		No. of	Total	Average Annual			No. of	Total	Average	Average		Annual		
		Cust.	Usage	Usage	Bill		Income		Cust.	Usage	Usage	Bill		Income
All	0	866	0	-	\$ 23.8	9 5	\$ 20,689		60	0	-	\$ 23.89	\$	1,433
	1 - 2,000	5,748	5,720,130	995	\$ 23.8	) ;	\$ 137,320		223	141,950	637	\$ 23.89	\$	5,327
	2,000 - 3,000	3,477	8,722,740	2,509	\$ 28.2	2	\$ 98,135		47	119,390	2,540	\$ 28.49	\$	1,339
	3,000 - 4,000	2,969	10,351,270	3,486	\$ 36.5	5 5	\$ 108,530		38	133,230	3,506	\$ 36.72	\$	1,395
	4,000 - 5,000	2,279	10,224,100	4,486	\$ 45.0	, ;	\$ 102,720		28	126,000	4,500	\$ 45.19	\$	1,265
	5,000 - 6,000	1,461	8,000,580	5,476	\$ 53.5	;	\$ 78,173		25	135,420	5,417	\$ 53.00	\$	1,325
	6,000 - 7,000	926	5,989,520	6,468	\$ 61.9	5	\$ 57,374		16	107,070	6,692	\$ 63.86	\$	1,022
	7,000 - 8,000	571	4,265,010	7,469	\$ 70.4	) ;	\$ 40,249		6	45,660	7,610	\$ 71.69	\$	430
	8,000 - 9,000	358	3,033,390	8,473	\$ 79.0	1 ;	\$ 28,297		5	43,000	8,600	\$ 80.12	\$	401
	9,000 - 10,000	243	2,294,340	9,442	\$ 87.2	) ;	\$ 21,212		5	47,160	9,432	\$ 87.21	\$	436
	10,000 - 11,000	164	1,723,320	10,508	\$ 98.6	1 ;	\$ 16,177		9	94,530	10,503	\$ 98.60	\$	887
	11,000 - 12,000	120	1,377,650	11,480	\$ 106.6	3	\$ 12,800		8	92,760	11,595	\$ 107.61	\$	861
	12,000 - 13,000	96	1,202,020	12,521	\$ 115.2	5 5	\$ 11,064		6	75,000	12,500	\$ 115.08	\$	690
	13,000 - 14,000	67	903,190	13,480	\$ 123.1	3	\$ 8,252		2	26,390	13,195	\$ 120.81	\$	242
	14,000 - 15,000	64	926,860	14,482	\$ 131.4	3 ;	\$ 8,411		4	57,860	14,465	\$ 131.29	\$	525
	15,000 - 16,000	58	897,690	15,477	\$ 139.6	1 ;	\$ 8,099		3	47,080	15,693	\$ 141.42	\$	424
	16,000 - 17,000	53	873,200	16,475	\$ 147.8	7 (	\$ 7,837		6	99,180	16,530	\$ 148.32	\$	890
	17,000 - 18,000	47	824,830	17,550	\$ 156.7	3 ;	\$ 7,366		1	17,100	17,100	\$ 153.03	\$	153
	18,000 - 19,000	36	666,370	18,510	\$ 164.6	;	\$ 5,928		4	74,470	18,618	\$ 165.54	\$	662
	19,000 - 20,000	28	548,770	19,599	\$ 173.6	1 ;	\$ 4,862		2	38,800	19,400	\$ 172.00	\$	344
	20,000 - 50,000	289	8,344,220	28,873	\$ 250.1	5 5	\$ 72,293		91	3,007,920	33,054	\$ 284.65	\$	25,903
	50,000-100,000	64	4,634,360	72,412	\$ 600.6	7 ;	\$ 38,443		39	2,830,600	72,579	\$ 602.01	\$	23,478
	100,000-200,000	42	5,526,610	131,586	\$ 1,063.7	;	\$ 44,678		28	3,943,600	140,843	\$ 1,135.04	\$	31,781
	over - 200,000	2	658,720	329,360	\$ 2,586.6	2 (	\$ 5,173		30	14,105,200	470,173	\$ 3,670.88	\$	110,127
	Sub-totals	20,028	87,708,890			Ç	\$ 944,084		686	25,409,370			\$	211,342

Projected Annual Income with Current 5/8"x3/4" Rate	\$ 1,155,426	
Additional 1-inch Meter Revenue per Minimum Bills:	11	\$ 2,641
Additional 1-1/2 inch Meter Revenue per Minimum Bills:	6	\$ 2,735
Additional 2-inch Meter Revenue per Minimum Bills:	20	\$ 16,925
Additional 3-inch Meter Revenue per Minimum Bills:	2	\$ 2,463
Additional 4-inch Meter Revenue per Minimum Bills:	2	\$ 3,344
Total Projected 12 Month Revenue With Current Rates	\$ 1,183,534	
	•	
Actual Water Sales FY2009 (per Dec. 31, 2019 Audit)	\$ 1,221,472	

### XVI. FORECAST OF WATER USAGE - INCOME - EXISTING USERS - PROPOSED LTRWC-PWA RATES

Meter	MONTHLY			Residentia	al					Commerc	ial	
Size	WATER USAGE			Customer	S					Custome	rs	
		No. of	Total	Average	Average	Annual		No. of	Total	Average	Average	Annual
		Cust.	Usage	Usage	Bill	Income		Cust.	Usage	Usage	Bill	Income
All	0	866	0	-	\$ 22.45	\$ 19,442		60	0	-	\$ 22.45	\$ 1,347
	1 - 2,000	5,748	5,720,130	995	\$ 22.45	\$ 129,043		223	141,950	637	\$ 22.45	\$ 5,006
	2,000 - 3,000	3,477	8,722,740	2,509	\$ 26.42	\$ 91,855		47	119,390	2,540	\$ 26.66	\$ 1,253
	3,000 - 4,000	2,969	10,351,270	3,486	\$ 34.04	\$ 101,078		38	133,230	3,506	\$ 34.20	\$ 1,299
	4,000 - 5,000	2,279	10,224,100	4,486	\$ 41.84	\$ 95,359		28	126,000	4,500	\$ 41.95	\$ 1,175
	5,000 - 6,000	1,461	8,000,580	5,476	\$ 49.56	\$ 72,412		25	135,420	5,417	\$ 49.10	\$ 1,228
	6,000 - 7,000	926	5,989,520	6,468	\$ 57.30	\$ 53,061		16	107,070	6,692	\$ 59.05	\$ 945
	7,000 - 8,000	571	4,265,010	7,469	\$ 65.11	\$ 37,178		6	45,660	7,610	\$ 66.21	\$ 397
	8,000 - 9,000	358	3,033,390	8,473	\$ 72.94	\$ 26,113	1	5	43,000	8,600	\$ 73.93	\$ 370
	9,000 - 10,000	243	2,294,340	9,442	\$ 80.50	\$ 19,560	1	5	47,160	9,432	\$ 80.42	\$ 402
	10,000 - 11,000	164	1,723,320	10,508	\$ 88.68	\$ 14,543	1	9	94,530	10,503	\$ 88.64	\$ 798
	11,000 - 12,000	120	1,377,650	11,480	\$ 96.00	\$ 11,520	1	8	92,760	11,595	\$ 96.86	\$ 775
	12,000 - 13,000	96	1,202,020	12,521	\$ 103.83	\$ 9,968	1	6	75,000	12,500	\$ 103.68	\$ 622
	13,000 - 14,000	67	903,190	13,480	\$ 111.06	\$ 7,441	1	2	26,390	13,195	\$ 108.91	\$ 218
	14,000 - 15,000	64	926,860	14,482	\$ 118.60	\$ 7,590	1	4	57,860	14,465	\$ 118.47	\$ 474
	15,000 - 16,000	58	897,690	15,477	\$ 126.09	\$ 7,314	Ī	3	47,080	15,693	\$ 127.72	\$ 383
	16,000 - 17,000	53	873,200	16,475	\$ 133.61	\$ 7,081	1	6	99,180	16,530	\$ 134.02	\$ 804
	17,000 - 18,000	47	824,830	17,550	\$ 141.70	\$ 6,660	1	1	17,100	17,100	\$ 138.31	\$ 138
	18,000 - 19,000	36	666,370	18,510	\$ 148.93	\$ 5,362	1	4	74,470	18,618	\$ 149.74	\$ 599
	19,000 - 20,000	28	548,770	19,599	\$ 157.13	\$ 4,400	1	2	38,800	19,400	\$ 155.63	\$ 311
	20,000 - 50,000	289	8,344,220	28,873	\$ 226.96	\$ 65,592	1	91	3,007,920	33,054	\$ 258.45	\$ 23,519
	50,000-100,000	64	4,634,360	72,412	\$ 548.54	\$ 35,106		39	2,830,600	72,579	\$ 549.75	\$ 21,440
	100,000-200,000	42	5,526,610	131,586	\$ 969.02	\$ 40,699	1	28	3,943,600	140,843	\$ 1,033.63	\$ 28,942
	over - 200,000	2	658,720	329,360	\$ 2,349.48	\$ 4,699		30	14,105,200	470,173	\$ 3,332.36	\$ 99,971
	Sub-totals	20,028	87,708,890			\$ 873,075		686	25,409,370			\$ 192,416

Projected Annual Income with Current 5/8"x3/4" Rate	\$ 1,065,491	
Additional 1-inch Meter Revenue per Minimum Bills:	\$ 2,641	
Additional 1-1/2 inch Meter Revenue per Minimum Bills:	6	\$ 2,735
Additional 2-inch Meter Revenue per Minimum Bills:	\$ 16,925	
Additional 3-inch Meter Revenue per Minimum Bills:	\$ 2,463	
Additional 4-inch Meter Revenue per Minimum Bills:	\$ 3,344	
Total Projected 12 Month Revenue w/ Estimated LTRWC	-PWA Rates	\$ 1,093,598

# XVII. FORECAST OF WATER USAGE - INCOME - EXISTING USERS - RECOMMENDED GRANT RATES

Meter	MONTHLY	Residential									Commercial					
Size	WATER USAGE			Customer	S						Customers					
		No. of	Total	Average	A	Average		Annual		No. of	Total	Average		Average		Annual
		Cust.	Usage	Usage		Bill		Income		Cust.	Usage	Usage		Bill		Income
All	0	866	0	-	\$	24.02	\$	20,801		60	0	-	\$	24.02	\$	1,441
	1 - 2,000	5,748	5,720,130	995		24.02	\$	138,067		223	141,950	637	\$	24.02	\$	5,356
	2,000 - 3,000	3,477	8,722,740	2,509	\$	28.27	\$	98,287		47	119,390	2,540	\$	28.53	\$	1,341
	3,000 - 4,000	2,969	10,351,270	3,486	\$	36.43	\$	108,166		38	133,230	3,506	\$	36.60	\$	1,391
	4,000 - 5,000	2,279	10,224,100	4,486	\$	44.78	\$	102,054		28	126,000	4,500	\$	44.90	\$	1,257
	5,000 - 6,000	1,461	8,000,580	5,476	\$	53.05	\$	77,499		25	135,420	5,417	65	52.55	\$	1,314
	6,000 - 7,000	926	5,989,520	6,468	\$	61.33	\$	56,791		16	107,070	6,692	\$	63.20	\$	1,011
	7,000 - 8,000	571	4,265,010	7,469	\$	69.69	\$	39,793		6	45,660	7,610	\$	70.86	\$	425
	8,000 - 9,000	358	3,033,390	8,473	\$	78.07	\$	27,949		5	43,000	8,600	\$	79.13	\$	396
	9,000 - 10,000	243	2,294,340	9,442	\$	86.16	\$	20,936		5	47,160	9,432	\$	86.08	\$	430
	10,000 - 11,000	164	1,723,320	10,508	\$	94.91	\$	15,566		9	94,530	10,503	\$	94.88	\$	854
	11,000 - 12,000	120	1,377,650	11,480	\$	102.75	\$	12,330		8	92,760	11,595	\$	103.68	\$	829
	12,000 - 13,000	96	1,202,020	12,521	\$	111.14	\$	10,669		6	75,000	12,500	\$	110.97	\$	666
	13,000 - 14,000	67	903,190	13,480	\$	118.87	\$	7,964		2	26,390	13,195	\$	116.57	\$	233
	14,000 - 15,000	64	926,860	14,482	\$	126.95	\$	8,125	Î	4	57,860	14,465	\$	126.81	\$	507
	15,000 - 16,000	58	897,690	15,477	\$	134.97	\$	7,828	Î	3	47,080	15,693	\$	136.71	\$	410
	16,000 - 17,000	53	873,200	16,475	\$	143.01	\$	7,580	Ì	6	99,180	16,530	\$	143.45	\$	861
	17,000 - 18,000	47	824,830	17,550	\$	151.67	\$	7,128	Ì	1	17,100	17,100	\$	148.05	\$	148
	18,000 - 19,000	36	666,370	18,510	\$	159.41	\$	5,739	Ì	4	74,470	18,618	\$	160.28	\$	641
	19,000 - 20,000	28	548,770	19,599	\$	168.19	\$	4,709		2	38,800	19,400	\$	166.58	\$	333
	20,000 - 50,000	289	8,344,220	28,873	\$	242.93	\$	70,208		91	3,007,920	33,054	\$	276.64	\$	25,174
	50,000-100,000	64	4,634,360	72,412	\$	587.14	\$	37,577	Î	39	2,830,600	72,579	\$	588.44	\$	22,949
	100,000-200,000	42	5,526,610	131,586	\$	1,037.17	\$	43,561		28	3,943,600	140,843	\$	1,106.32	\$	30,977
	over - 200,000	2	658,720	329,360	\$ 2	2,514.54	\$	5,029		30	14,105,200	470,173	\$	3,566.41	\$	106,992
	Sub-totals	20,028	87,708,890				\$	934,357		686	25,409,370	_			\$	205,937

Projected Annual Income with Current 5/8"x3/4" Rate	\$ 1,140,294	
Additional 1-inch Meter Revenue per Minimum Bills:	11	\$ 2,641
Additional 1-1/2 inch Meter Revenue per Minimum Bills:	6	\$ 2,735
Additional 2-inch Meter Revenue per Minimum Bills:	20	\$ 16,925
Additional 3-inch Meter Revenue per Minimum Bills:	2	\$ 2,463
Additional 4-inch Meter Revenue per Minimum Bills:	2	\$ 3,344
Total Projected 12 Month Revenue w/ Recommended Pr	oject Rates	\$ 1,168,402

# XVIII. CURRENT OPERATING BUDGET - (FYE December 31, 2019 – Based on 2019 Audit & PSC Report)

### A. Operating Income

Total Operating Income   \$ 1,254,818.00		Water Sales Discount/Reconnect/Late Charge Fees Other (Describe)  Less Allowances and Deductions	\$ \$ \$ (\$	1,221,472.00 19,991.00 13,355.00
Pumping Expense   \$ -	B.	Operation and Maintenance Expenses: (Based on Uniform System of Accounts prescribed by		
Net Operating Income       \$ 318,988.00         C.       Non-Operating Income:         Interests on Deposits Other (Identify)       \$ 1,419.00         Other (Identify)       \$ (2,400.00)         Total Non-Operating Income       \$ (981.00)         D.       Net Income       \$ 318,007.00         E.       Debt Repayment         RUS Interest RUS Principal & Reserve Security Non-RUS Interest Non-RUS Interest Security Non-RUS Principal       \$ -         Total Debt Repayment       \$ 150,553.00         F.       Short Lived Assets       \$ 6,040.00		Pumping Expense Water Treatment Expense Transmission and Distribution Expense Customer Service Expense	\$ \$ \$	87,638.00 41,420.00
Interests on Deposits				
E. Debt Repayment         RUS Interest RUS Principal & Reserve Non-RUS Interest Non-RUS Interest Non-RUS Principal       \$ 60,316.00         Total Debt Repayment       \$ -         Total Debt Repayment       \$ 150,553.00         F. Short Lived Assets       \$ 6,040.00	C.	Interests on Deposits Other (Identify)	\$	(2,400.00)
RUS Interest \$ 90,237.00 RUS Principal & Reserve \$ 60,316.00 Non-RUS Interest \$ - Non-RUS Principal \$ -  Total Debt Repayment \$ 150,553.00  F. Short Lived Assets \$ 6,040.00	D.	Net Income	\$	318,007.00
Non-RUS Principal         \$ -           Total Debt Repayment         \$ 150,553.00           F. Short Lived Assets         \$ 6,040.00	E.	RUS Interest RUS Principal & Reserve	\$	
F. Short Lived Assets \$ 6,040.00		Non-RUS Principal	\$	
	F			

#### XIX. PROPOSED OPERATING BUDGET - EXISTING & NEW USERS - RECOMMENDED WATER RATES

(1st Full Year of Operation)

Year Ending 2021 .

A. Operating Income

A.	Operating Income		
	Water Sales	\$	1,168,402.00 <sup>(1)</sup>
	Discount/Reconnect/Late Charge Fees	\$	19,991.00
	Other (Describe)	\$	13,355.00
	Less Allowances and Deductions	(	)
	Total Operating Income	\$	1,201,748.00
B.	Operation and Maintenance Expenses: (Based on Uniform System of Accounts prescribed Association of Regulatory Utility Commissioners)	by Natior	nal
	Source of Supply Expense	\$	492,614.00 (2)
	Pumping Expense	_\$	
	Water Treatment Expense	\$	<u>-</u>
	Transmission and Distribution Expense	\$	90,268.00 (3)
	Customer Service Expense	\$	42,660.00 (3)
	Administrative and General Expense	\$	232,686.00
	Total Operating Expenses		858,228.00
	Net Operating Income	\$	343,520.00
C.	Non-Operating Income:		
	Interests on Deposits	\$	1,419.00
	Other (Identify)	\$	(2,400.00)
	Total Non-Operating Income	\$	(981.00)
D.	Net Income	\$	342,539.00
E.	Debt Repayment		
	RUS Interest (pre - 2020)	\$	87,309.00 (4)
	RUS Principal & Reserve (pre - 2020)	\$	63,311.00 (4)
	RUS Interest (new)	\$	15,000.00 (5)
	RUS Principal & Reserve (new)	\$	14,625.00 (5)
	Non-RUS Interest	\$	-
	D.10 D.1 1 1		

#### Notes:

- 1. Estimated Water Sales per Forecast with Existing Customer Base, 2019 usage & new rates.
- 2. No new customers expected. Reflects \$0.58/1,000 gallon decrease from LTRWC, passed in 2020

180,245.00 <sup>(6)</sup>

6,040.00

156,254.00

3. Based on 3% nominal increase due to anticipated annual cost increases.

Balance Available for Coverage & Depreciation

- 4. Debt Service per Amortization Schedules. 2021 Figures used for Future.
- 5. Estimated New Debt Service: Based on a \$800,000 RUS Loan at 1.875% and 38 payments.
- 6. Estimated Debt Service for 2021.

Non-RUS Principal

**Short Lived Assets** 

Total Debt Repayment

F.

G.

### XX. PROPOSED OPERATING BUDGET - NEW USERS - EXTENSION ONLY - EXISTING WATER RATES

(1st Full Year of Operation) Year Ending 2021 .

A. Operating Income

Water Sales	\$	(1)
Discount/Reconnect/Late Charge Fees	\$	-
Other (Describe)	\$	-
Less Allowances and Deductions	(	)

B. Operation and Maintenance Expenses:

Total Operating Income

(Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)

Source of Supply Expense	\$ 88,252.00	(2)
Pumping Expense	\$ -	
Water Treatment Expense	\$ -	
Transmission and Distribution Expense	\$ 2,630.00	(3)
Customer Service Expense	\$ 1,240.00	(3)
Administrative and General Expense	\$ 6,780.00	(3)

Total Operating Expenses \$ 98,902.00

Net Operating Income \$ (98,902.00)

C. Non-Operating Income:

Interests on Deposits	\$ -
Other (Identify)	\$ -
Total Non-Operating Income	\$ _

- D. Net Income \$ (98,902.00)
- E. Debt Repayment

RUS Interest	\$ 15,000.00 <sup>(4)</sup>
RUS Principal & Reserve	\$ 14,625.00 (4)
Non-RUS Interest	\$ -
Non-RUS Principal	\$ -
	 (5)

Total Debt Repayment \$29,625.00 (5)

- F. Short Lived Assets \$ -
- G. Balance Available for Coverage & Depreciation \$ (128,527.00)

#### Notes:

- 1. Based on 0 new customers.
- 2. No new customers or added demand resulting from project. Adjusted for 147,932,000 gallons purchased at new lower wholesale rate of \$3.33/1k vs. \$3.91.
- 3. Based on 3% nominal increase due to anticipated annual cost increases.
- 4. Estimated New Debt Service: Based on a \$800,000 RUS Loan at 1.875% and 38 payments.

# XXI. <u>ESTIMATED PROJECT COST - WATER</u>

Development	\$	796,600.00
Land and Rights	\$	20,000.00
Legal & Administrative	\$	16,000.00
Engineering & Inspection	\$	95,500.00
Interest	\$	25,000.00
Contingencies	\$	81,900.00
Initial Operating and Maintenance		
Other (PER, EA & Geotech Testing)	\$	30,000.00
TOTAL	\$ 1,065,000.00	

## XXII. PROPOSED PROJECT FUNDING

Applicant - User Connection Fees	\$	
Other Applicant Contribution	\$	<u>-</u>
Rural Development Loan	\$	800,000.00
Rural Development Grant	\$	265,000.00
Other (Specify)	\$	
Other (Specify)	\$	<u>-</u>
Other (Specify)	\$	
Other (Specify)	\$	
TOTAL	\$ ^	1,065,000.00