

**Kentucky Infrastructure Authority  
Projects for  
October 2019 Capital Projects Meeting**

- Fund A Loan**

<u>Loan #</u>	<u>Borrower</u>	<u>Amount Requested</u>	<u>Loan Total</u>	<u>County</u>
A20-002	City of Burkesville (Construction)	\$ 2,580,370	\$ 2,831,370	Cumberland
A20-045	City of Nicholasville (P&D)	\$ 910,000	\$ 910,000	Jessamine

- Fund F Loan**

<u>Loan #</u>	<u>Borrower</u>	<u>Amount Requested</u>	<u>Loan Total</u>	<u>County</u>
F18-006	City of Lebanon (Increase)	\$ 1,855,457	\$ 4,497,137	Marion

<b>EXECUTIVE SUMMARY</b>		Reviewer	Meili Sun	
<b>KENTUCKY INFRASTRUCTURE AUTHORITY</b>		Date	September 26, 2019	
<b>FUND A, FEDERALLY ASSISTED WASTEWATER</b>		KIA Loan Number	A20-002	
<b>REVOLVING LOAN FUND</b>		WRIS Number	SX21057002	
BORROWER	CITY OF BURKESVILLE CUMBERLAND COUNTY			
<b>BRIEF DESCRIPTION</b>				
This is the construction portion of the WWTP Improvements project. The planning and design portion was previously approved on February 7, 2019 and has been completed with DOW approvals of Plans & Specs and Environmental Review.				
The project will include improvements to the plant's headwork facilities and the chlorine contact basin. In addition to the work at the treatment plant site, the City will replace the existing pump station that serves a major industrial customer in the City. This pump station has nearly reached the end of its usable life.				
<b>PROJECT FINANCING</b>		<b>PROJECT BUDGET</b>		
Fund A Loan	\$2,580,370	Administrative Expenses	RD Fee %	Actual %
P&D A19-045	251,000	Legal Expenses		
CDBG	1,000,000	Planning		
		Eng - Design / Const	7.1%	7.1%
		Eng - Insp	5.2%	5.2%
		Eng - Other		
		Construction		
		Contingency		
<b>TOTAL</b>	<b>\$3,831,370</b>	<b>TOTAL</b>		<b>\$3,831,370</b>
<b>REPAYMENT</b>	Rate	0.50%	Est. Annual Payment	\$69,477
	Term	30 Years	1st Payment	6 Mo. after first draw
<b>PROFESSIONAL SERVICES</b>	Engineer	GRW Engineers, Inc		
	Bond Counsel	Rubin & Hays		
<b>PROJECT SCHEDULE</b>	Bid Opening	Mar-20		
	Construction Start	May-20		
	Construction Stop	Jun-21		
<b>DEBT PER CUSTOMER</b>	Existing	\$4,829		
	Proposed	\$7,022		
<b>OTHER DEBT</b>	See Attached			
<b>RESIDENTIAL RATES</b>		<u>Users</u>	<u>Avg. Bill</u>	
	Current	599	\$32.62	(for 4,000 gallons)
	Additional	0	\$32.62	(for 4,000 gallons)
<b>REGIONAL COORDINATION</b>	This project is consistent with regional planning recommendations.			
<b>CASHFLOW</b>	Cash Flow Before Debt Service	Debt Service	Cash Flow After Debt Service	Coverage Ratio
Audited 2016	233,234	209,353	23,881	1.1
Audited 2017	222,159	233,209	(11,050)	1.0
Audited 2018	383,109	249,609	133,500	1.5
Projected 2019	379,346	243,116	136,230	1.6
Projected 2020	375,398	227,090	148,308	1.7
Projected 2021	371,261	227,603	143,658	1.6
Projected 2022	359,830	261,694	98,137	1.4
Projected 2023	355,301	296,778	58,523	1.2

Reviewer: Meili Sun  
Date: September 26, 2019  
Loan Number: A20-002

**KENTUCKY INFRASTRUCTURE AUTHORITY  
WASTEWATER REVOLVING LOAN FUND (FUND A)  
CITY OF BURKESVILLE, CUMBERLAND COUNTY  
PROJECT REVIEW  
SX21057002**

**I. PROJECT DESCRIPTION**

This is the construction portion of the Wastewater Treatment Plant Improvements project. The planning and design portion was previously approved on February 7, 2019 and has been completed with the Division of Water approvals of Plans & Specs and Environmental Review.

The purpose of this project is to bring the treatment plant up to date with the regulatory requirements. It will improve the plant's headworks facilities by replacing the grit removal system and influent sampler, refurbishing the influent piping, HVAC, electrical and architectural components. Other replacements include the oxidation ditch equipment (motors, gear boxes, line shafts, bearings, etc.), the final clarifier equipment, as well as the chlorine gas disinfection system with a peracetic acid system. The scope of work also covers improvements to the chlorine contact basin, installation of new RAS/WAS pumping and new sludge processing equipment, upgrades to the existing electrical and instrumentation equipment, and replacement of an existing pump station that serves one major industrial customer.

The City of Burkesville currently serves approximately 600 customers within the service area and supplies wholesale water to the Cumberland County Water District, which is regulated by the PSC.

**II. PROJECT BUDGET**

	<u>Total</u>
Administrative Expenses	\$ 60,000
Legal Expenses	5,000
Planning	66,500
Engineering Fees – Design	184,500
Engineering – Construction	46,100
Engineering – Inspection	169,100
Engineering – Other	74,500
Construction	2,932,428
Contingency	293,242
	<u>\$ 3,831,370</u>

### III. PROJECT FUNDING

	Amount	%
KIA A20-002	\$ 2,580,370	67%
KIA A19-045 P&D	251,000	7%
CDBG Grant	1,000,000	26%
<b>Total</b>	<b>\$ 3,831,370</b>	<b>100%</b>

### IV. KIA DEBT SERVICE

Construction Loan	\$ 2,831,370
Principal Forgiveness	1,000,000
Amortized Loan Amount	\$ 1,831,370
Interest Rate	0.50%
Loan Term (Year)	30
Estimated Annual Debt Service	\$ 65,815
Administrative Fee (0.20%)	3,663
<b>Annual Debt Service</b>	<b>\$ 69,477</b>

### V. PROJECT SCHEDULE

Bid Opening	March 2020
Construction Start	May 2020
Construction Stop	June 2021

### VI. CUSTOMER COMPOSITION AND RATE STRUCTURE

#### A) Customers

	Current
Residential	435
Commercial	126
Industrial	4
Institutional	34
Total	599

## B) Rates

	Water Inside City		Water Outside City	
	Current	Prior	Current	Prior
Date of Last Rate Increase	10/19/18	10/19/17	10/19/18	10/19/17
First 2,000 Gallons	\$18.87	\$18.68	\$30.57	\$30.27
Next 13,000 Gallons	6.27	6.21	7.63	7.56
Next 15,000 Gallons	5.48	5.43	6.14	6.08
Cost for 4,000 gallons	\$31.41	\$31.10	\$45.83	\$45.39
Increase %	1.0%		1.0%	
Affordability Index (Rate/MHI)	1.9%	1.9%	2.8%	2.8%

	Sewer	
	Current	Prior
Date of Last Rate Increase	10/19/18	10/19/17
First 2,000 Gallons	\$18.86	\$18.68
Next 13,000 Gallons	6.88	6.82
Next 15,000 Gallons	5.75	5.70
Cost for 4,000 gallons	\$32.62	\$32.32
Increase %	0.9%	
Affordability Index (Rate/MHI)	2.0%	

## VII. DEMOGRAPHICS

Based on current Census data from the American Community Survey 5-Year Estimate 2013-2017, the Utility's service area population was 1,491 with a Median Household Income (MHI) of \$19,772. The median household income for the Commonwealth is \$46,535. The project will qualify for a 0.50% interest rate with its MHI below 80% of the State average.

Year	Population		County		County Unemployment	
	City	% Change	County	% Change	Date	Rate
1980	2,051		7,289		June 2005	6.6%
1990	1,815	-11.5%	6,784	-6.9%	June 2010	10.5%
2000	1,756	-3.3%	7,147	5.4%	June 2015	5.3%
2010	1,521	-13.4%	6,856	-4.1%	June 2019	4.4%
Current	1,522	0.1%	6,744	-1.6%		
Cumulative %		-25.8%		-7.5%		

## **VIII. 2019 CAPITALIZATION GRANT EQUIVALENCIES**

- 1) Green Project Reserve - This project does not qualify for Green Project Reserve (GPR) funding.
- 2) Additional Subsidization – This project qualifies for additional subsidization. Principal forgiveness of 50% of the assistance amount, not to exceed \$1,000,000 will be credited to the loan balance upon release of liens on all contracts and disbursement of the final draw request by KIA to the borrower.

## **IX. FINANCIAL ANALYSIS**

Financial information was obtained from the audited financial statements for the years ended June 30, 2016 through 2018. The non-cash impacts of GASB 68 - Accounting and Financial Reporting for Pensions and GASB 75 - Other Postemployment Benefit have been removed from operating expenses. Percentage references in the History section below are based on whole dollar amounts and not the rounded amounts presented.

### **HISTORY**

Combined water and sewer revenues went up 16.3% from \$0.96 million in 2016 to \$1.11 million in 2018 due to changes in terms of service agreement with the Cumberland County Water District while operating expenses increased less than 1.0% from \$0.72 million to \$0.73 million during the same period. The debt coverage ratio was 1.1, 1.0, and 1.5 for 2016, 2017, and 2018 respectively.

The balance sheet reflects a current ratio of 2.6, debt to equity ratio of 0.6, 39.7 days sales in accounts receivable, and 7.0 months of operating expenses in unrestricted cash.

### **PROJECTIONS**

Projections are based on the following assumptions:

- 1) Sewer and retail water revenues will increase 1% annually based on the automatic adjustment clause adopted in the 2011 rate ordinance.
- 2) Wholesale revenues are estimated to grow 1% due to volume increase. In September, 2017, the City modified the service agreement with the Cumberland County Water District to reduce wholesale rate from \$2.21 to \$2.15 per 1,000 gallons while increasing volume from 3 million gallons or less per month to 1 million gallons or less per day. Wholesale water accounts for approximately 70% of the total water revenues.
- 3) Expenses will increase 2% each year for inflation.
- 4) Debt service coverage is 1.2 in 2023 when full year principal and interest repayments begin.

Based on the pro forma assumptions, the utility shows adequate cash flow to repay the KIA Fund A loan.

**REPLACEMENT RESERVE**

The replacement reserve will be 5% (\$142,000 total) of the final amount borrowed (prior to principal forgiveness) to be funded annually (\$7,100 yearly) each December 1 for 20 years and maintained for the life of the loan.

**X. DEBT OBLIGATIONS**

	Outstanding	Maturity
1980 Bonds	\$ 15,000	2019
1990 Bonds	176,000	2028
1992 Bonds	640,000	2032
1998 Bonds	134,600	2036
KIA Loan F209-13	343,754	2031
KIA Loan A11-18	587,358	2035
KIA Loan B13-004	417,815	2031
KIA Loan F15-017	577,881	2035
<b>Total</b>	<b>\$ 2,892,408</b>	

**XI. CONTACTS**

<b>Legal Applicant</b>	
Name	City of Burkesville
Address	214 Upper River St, Box 250 Burkesville, KY 42717
County	Cumberland
Authorized Official	Billy Guffey, Mayor
Phone	(270) 864-5391
Email	burkesvillemayor@gmail.com

<b>Project Contact</b>	
Name	Judy Hachey
Organization	LCADD
Address	2384 Lakeway Dr, PO Box 1570 Russell Springs, KY 42642
Phone	(270) 866-4200
Email	judyh@lcadd.org

**Project Administrator**

Name	Laura Gilkerson
Organization	GRW Engineers, Inc
Address	801 Corporate Dr, Lexington, KY 40503
Phone	(859) 229-2667
Email	lgilkerson@grwinc.com

**Consulting Engineer**

Name	Michael Lynn Jacobs
Firm	GRW Engineers, Inc
Address	801 Corporate Dr Lexington, KY 40503
Phone	(859) 223-3999
Email	mjacobs@grwinc.com

**XII. RECOMMENDATIONS**

KIA staff recommends approval of the loan with the standard conditions.



**CITY OF BURKESVILLE  
FINANCIAL SUMMARY (JUNE YEAR END)**

	<u>Audited</u> <u>2016</u>	<u>Audited</u> <u>2017</u>	<u>Audited</u> <u>2018</u>	<u>Projected</u> <u>2019</u>	<u>Projected</u> <u>2020</u>	<u>Projected</u> <u>2021</u>	<u>Projected</u> <u>2022</u>	<u>Projected</u> <u>2023</u>
<b>Balance Sheet</b>								
<b>Assets</b>								
Current Assets	505,500	448,931	549,793	578,189	609,051	638,982	659,810	672,714
Other Assets	10,344,079	10,168,277	9,950,387	9,454,538	9,211,135	12,699,599	12,327,375	11,923,460
<b>Total</b>	<b>10,849,579</b>	<b>10,617,208</b>	<b>10,500,180</b>	<b>10,032,727</b>	<b>9,820,186</b>	<b>13,338,581</b>	<b>12,987,185</b>	<b>12,596,175</b>
<b>Liabilities &amp; Equity</b>								
Current Liabilities	191,366	194,792	211,539	200,200	204,698	269,250	273,867	278,492
Long Term Liabilities	3,445,534	3,452,096	3,567,884	3,335,270	3,163,806	4,759,460	4,519,428	4,275,070
<b>Total Liabilities</b>	<b>3,636,900</b>	<b>3,646,888</b>	<b>3,779,423</b>	<b>3,535,470</b>	<b>3,368,504</b>	<b>5,028,710</b>	<b>4,793,294</b>	<b>4,553,562</b>
<b>Net Assets</b>	<b>7,212,679</b>	<b>6,970,320</b>	<b>6,720,757</b>	<b>6,497,257</b>	<b>6,451,682</b>	<b>8,309,871</b>	<b>8,193,890</b>	<b>8,042,613</b>
<b>Cash Flow</b>								
Revenues	955,744	956,132	1,111,815	1,122,705	1,133,703	1,144,811	1,156,030	1,167,362
Operating Expenses	725,473	737,087	732,639	747,292	762,238	777,483	800,133	815,994
Other Income	2,963	3,114	3,933	3,933	3,933	3,933	3,933	3,933
<b>Cash Flow Before Debt Service</b>	<b>233,234</b>	<b>222,159</b>	<b>383,109</b>	<b>379,346</b>	<b>375,398</b>	<b>371,261</b>	<b>359,830</b>	<b>355,301</b>
<b>Debt Service</b>								
Existing Debt Service	209,353	233,209	249,609	243,116	227,090	227,603	226,955	227,301
Proposed KIA Loan	0	0	0	0	0	0	34,739	69,477
<b>Total Debt Service</b>	<b>209,353</b>	<b>233,209</b>	<b>249,609</b>	<b>243,116</b>	<b>227,090</b>	<b>227,603</b>	<b>261,694</b>	<b>296,778</b>
<b>Cash Flow After Debt Service</b>	<b>23,881</b>	<b>(11,050)</b>	<b>133,500</b>	<b>136,230</b>	<b>148,308</b>	<b>143,658</b>	<b>98,137</b>	<b>58,523</b>
<b>Ratios</b>								
Current Ratio	2.6	2.3	2.6	2.9	3.0	2.4	2.4	2.4
Debt to Equity	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.6
Days Sales in Accounts Receivable	41.3	40.8	39.7	39.7	39.7	39.7	39.7	39.7
Months Operating Expenses in Unrestricted Cash	6.6	5.6	7.0	7.3	7.6	7.9	8.1	8.1
Debt Coverage Ratio	1.1	1.0	1.5	1.6	1.7	1.6	1.4	1.2

<b>EXECUTIVE SUMMARY</b> <b>KENTUCKY INFRASTRUCTURE AUTHORITY</b> <b>FUND A, FEDERALLY ASSISTED WASTEWATER</b> <b>REVOLVING LOAN FUND</b>		Reviewer Date KIA Loan Number WRIS Number	Michael Dant September 26, 2019 A20-045 SX21113028	
BORROWER	CITY OF NICHOLASVILLE JESSAMINE COUNTY			
BRIEF DESCRIPTION This is the design phase of project that will expand the Nicholasville Waste Water Treatment Plant. The plant currently has a design capacity of 4.1 MGD but has been averging 4.3 MGD. The anticipated design for the expansion would include, among other things, a second oxidation ditch with a design capacity of 3 MGD.				
PROJECT FINANCING		PROJECT BUDGET		
Fund A Loan	\$910,000	Administrative Expenses	\$20,000	
		Legal Expenses	10,000	
		Land, Easements	-	
		Relocation Expense & Payments	-	
		Planning	230,000	
		Eng - Design / Const	650,000	
		Eng - Insp	-	
		Eng - Other	-	
		Construction	-	
		Equipment	-	
		Contingency	-	
		Other	-	
TOTAL	\$910,000	TOTAL	\$910,000	
REPAYMENT	Rate Term	2.50% 5 Years	Est. Annual Payment 1st Payment      6 Mo. after first draw \$196,566	
PROFESSIONAL SERVICES	Engineer Bond Counsel	Haworth, Meyer & Boleyn, Inc. Rubin & Hays		
PROJECT SCHEDULE	Bid Opening Construction Start Construction Stop	Jan-21 Apr-21 Jun-22		
DEBT PER CUSTOMER (water & sewer combined)	Existing Proposed	\$1,815 \$1,368		
OTHER DEBT	See Attached			
OTHER STATE-FUNDED PROJECTS LAST 5 YRS	See Attached			
RESIDENTIAL RATES	Current Additional	<u>Users</u> 14,053 0	<u>Avg. Bill</u> \$25.75 (for 4,000 gallons) \$25.75 (for 4,000 gallons)	
REGIONAL COORDINATION	This project is consistent with regional planning recommendations.			
CASHFLOW	Cash Flow Before Debt Service	Debt Service	Cash Flow After Debt Service	Coverage Ratio
Audited 2016	3,745,270	4,050,386	(305,116)	0.9
Audited 2017	4,387,065	4,086,663	300,402	1.1
Audited 2018	3,618,626	4,019,442	(400,816)	0.9
Projected 2019	4,434,704	2,931,229	1,503,475	1.5
Projected 2020	5,556,604	2,873,766	2,682,838	1.9
Projected 2021	5,481,715	3,119,722	2,361,993	1.8
Projected 2022	5,311,170	3,361,920	1,949,250	1.6
Projected 2023	5,137,234	3,357,374	1,779,860	1.5

Reviewer: Michael Dant  
Date: September 26, 2019  
Loan Number: A20-045

**KENTUCKY INFRASTRUCTURE AUTHORITY  
WASTEWATER REVOLVING LOAN FUND (FUND A)  
CITY OF NICHOLASVILLE, JESSAMINE COUNTY  
PROJECT REVIEW  
SX21113028**

**I. PROJECT DESCRIPTION**

The City of Nicholasville is requesting a \$910,000 Planning and Design Loan from 2020 SRF.

The proposed project consists of a new Facility Plan with provisions to increase the waste water treatment plant capacity. The existing Wastewater Treatment Plant (WWTP), which has a design capacity of 4.1 MGD with a peak flow of 23.16 MGD, had an average daily flow of 4.3 MGD for the past 12 months.

The proposed WWTP Upgrade project will consist of the addition of a second oxidation ditch with a design capacity of 3.0 MGD. A new oxidation ditch splitter box will be constructed to direct flow to existing ditch No.1, proposed ditch No.2, or both. The project will also include the construction of a new 100' diameter Clarifier No. 4 which will be required due to the additional design capacity of the WWTP, along with a clarifier splitter box to allow flow to be diverted to any one of the four Clarifiers or a combination of the four. A second Aerobic Digester will also be constructed to accommodate for the additional sludge produced. A new chemical feed system and building will be constructed. Additionally, the grit removal equipment, Ultraviolet disinfection equipment, WWTP Drain Pumping Station, Sludge Processing conveyor system, Clarifiers No.1 & 2 equipment and drives that were installed in 1996 when the WWTP was originally constructed, will be removed and replaced with new. The existing Supervisory Control and Data Acquisition (SCADA) System will also be upgraded to include the new oxidation ditch and clarifier as well as the new equipment installed. The existing emergency generator and automatic transfer switch at influent pump station No.1 will be replaced with a larger generator and switch capable of operating all five (5) pumps in the station rather than only four (4). The project will also include necessary site work, yard piping, and mechanical & electrical improvements.

The Nicholasville Sewer Department currently serves approximately 11,319 customers in Jessamine County.

## II. PROJECT BUDGET

	<u>Total</u>
Administrative Expenses	\$ 20,000
Legal Expenses	10,000
Planning	230,000
Engineering Fees - Design	650,000
<b>Total</b>	<b>\$ 910,000</b>

## III. PROJECT FUNDING

	<u>Amount</u>	<u>%</u>
Fund A P&D Loan	\$ 910,000	100%
<b>Total</b>	<b>\$ 910,000</b>	<b>100%</b>

## IV. KIA DEBT SERVICE

Planning & Design Loan	\$ 910,000
Less: Principal Forgiveness	0
Amortized Loan Amount	\$ 910,000
Interest Rate	2.50%
Loan Term (Years)	5
Estimated Annual Debt Service	\$ 194,746
Administrative Fee (0.20%)	1,820
<b>Total Estimated Annual Debt Service</b>	<b>\$ 196,566</b>

## V. PROJECT SCHEDULE

Estimated Bid Date	1/1/2021
Construction Start	4/1/2021
Construction Completion	6/1/2022

## VI. CUSTOMER COMPOSITION AND RATE STRUCTURE

### A) Customers

	<u>Current</u>
Residential	13,121
Commercial	906
Industrial	26
<b>Total</b>	<b>14,053</b>

## B) Rates

<b>SEWER</b>	INSIDE CITY		OUTSIDE CITY	
	Current	Prior	Current	Prior
Date of Last Rate Increase	09/01/19	07/01/09	09/01/19	07/01/09
Minimum	\$6.75	\$4.25	\$8.85	\$6.35
Volume charge per 1,000 gallons	4.75	4.56	7.11	6.84
Cost for 4,000 gallons	\$25.75	\$22.49	\$37.29	\$33.71
Increase %	14.5%		10.6%	
Affordability Index (Rate/MHI)	0.6%	0.6%	0.9%	0.8%
<b>WATER</b>				
	Inside City		Outside City	
	Current	Prior	Current	Prior
Date of Last Rate Increase	08/01/19	08/01/18	08/01/19	08/01/18
Minimum	\$5.25	\$4.42	\$7.45	\$6.60
First 10,000 Gallons, per 1,000	4.43	4.43	6.48	6.48
All Over 10,000 Gallons, per 1,000	4.29	4.29	6.28	6.28
Cost for 4,000 gallons	\$22.97	\$22.14	\$33.37	\$32.52
Increase %	3.7%		2.6%	
Affordability Index (Rate/MHI)	0.6%	0.6%	0.9%	0.9%

## VII. DEMOGRAPHICS

Based on current Census data from the American Community Survey 5-Year Estimate 2013-2017, the Utility's service area population was 29,116 with a Median Household Income (MHI) of \$47,964. The median household income for the Commonwealth is \$46,535. The planning and design loan qualifies for the standard 2.5% interest rate.

Year	Population		County		County Unemployment	
	City	% Change	County	% Change	Date	Rate
1980	10,400		26,146		June 2005	5.3%
1990	13,603	30.8%	30,508	16.7%	June 2010	8.5%
2000	19,680	44.7%	39,041	28.0%	June 2015	4.6%
2010	28,015	42.4%	48,586	24.4%	June 2018	4.2%
Current	29,547	5.5%	51,667	6.3%		
Cumulative %		184.1%		97.6%		

## VIII. 2020 CAPITALIZATION GRANT EQUIVALENCIES

- 1) Green Project Reserve - This project does not qualify for Green Project Reserve (GPR) funding.
- 2) Additional Subsidization – This project does not qualify for additional subsidization.

## IX. FINANCIAL ANALYSIS

Financial information was obtained from the audited financial statements for the years ended June 30, 2013 through June 30, 2018 (2016-2018 presented). The non-cash impact of GASB 68, Accounting and Financial Reporting for Pensions, has been removed from fiscal 2016-2018 operating expenses and GASB 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions, has been removed from 2018 operating expenses. Percentage references in the History section below are based on whole dollar amounts and not the rounded amounts presented.

### HISTORY

The City of Nicholasville accounts for sewer operations as a part of its Utilities Fund. The Utilities Fund encompasses water, sewer, and electricity. Certain categories of revenue and expense are combined between these activities thus preventing a completely independent analysis of the sewer system alone. For this reason the entire utility fund was analyzed and projected while separating out information for the sewer system where practical.

Combined Revenues increased six percent from \$24.2 Million in 2016 to \$25.7 million in 2018. Expenses, not including depreciation, increased 7.6% from \$20.7 million in 2016 to \$22.3 million in 2018.

Cash flow before debt service available for debt service decreased 3.4% from \$3.7 million in 2016 to \$3.6 million in 2018.

The debt coverage ratio was 0.9 in 2016, 1.1 in 2017, and 0.9 in 2018.

Recent analysis performed for a previous project suggested that in the past few years the electric purchase cost fluctuations were not being fully reimbursed through the city's system of rate adjustment. That situation was corrected with a revised ordinance passed in August 2019.

The City was able to maintain current ratios of 1.1 or higher, and debt to equity of 0.8 or higher. In 2018 the City had 9.6 months of operating expenses in unrestricted cash.

## PROJECTIONS

Projections are based on the following assumptions:

- 1) Revenues are projected at 0% growth through 2023, except for:
  - Water = Based on already passed rate increases, a 6.4% and a 3.5% revenue increase is projected for 2019 and 2020, respectively.
  - Sewer = based on a rate increase passed in August of 2019, a 12% and a 2.3% revenue increase is projected for 2020 and 2021, respectively.
  - Electric Revenues were adjusted based on a revised rate schedule proposed to go into effect during FY 2020.
- 2) Expenses were projected to increase 2% each year, except:
  - Water Purchases were projected to increase at 0.4% each year based on a very small amount of water purchases that are subject to possible rate increases.
  - Electric Purchase Costs:
    - Electric purchases costs for FY 2019 were adjusted based on overpayment refunds received.
    - FY 2020 purchase costs were revised downward reflecting reduced rates from Kentucky Utilities.
    - The electric purchase costs from 2020 to 2023 are projected to be flat. This is based upon the City's proposal to review the electric net operating income each year and True-Up costs not recovered during the past year. Those costs would be recovered in the rate adjustments for the coming year.
- 3) The debt coverage ratio is 1.8 in FY 2021 when principal and interest repayments begin.

Based on the pro forma assumptions, the utility shows adequate cash flow to repay the KIA Fund A planning and design loan. Current estimates are that if the planning and design loan is rolled into the anticipated construction loan, the debt coverage ratio would be 1.22 in 2023 when principal payments would begin.

#### REPLACEMENT RESERVE

No replacement reserve is required for the planning and design loan. The need for a replacement reserve will be addressed as a part of the anticipated construction loan.

#### X. DEBT OBLIGATIONS

	<u>Outstanding</u>	<u>Maturity</u>
KIA - C02-02	\$1,400,457	2023
KIA - A06-07	\$6,948,527	2028
KIA - F07-08	\$5,892,114	2030
KIA - A08-06	\$4,151,120	2031
KIA - F13-022	\$436,243	2035
KIA - F115-066 (i/a/o \$416,120)	\$0	TBD
KIA - F17-001 (i/a/o \$553,000)	\$0	TBD
A15-090 – (i/a/o \$906,446)	\$27,840	TBD
General Obligation Bonds	\$6,538,262	2031
General Obligation Note	\$106,145	2023
<b>Total</b>	<b>\$25,500,708</b>	



## **XI. CONTACTS**

### **Legal Applicant**

Entity Name	City of Nicholasville
Authorized Official	Peter Sutherland (Mayor)
County	Jessamine
Email	pete.sutherland@nicholasville.org
Phone	(859) 885-1121
Address	P.O. Box 450 Nicholasville, KY 40356

### **Project Administrator**

Name	Robert A. Amato
Organization	City of Nicholasville
Email	bob.amato@nicholasville.org
Phone	(859) 885-9473
Address	601 N Main St. Nicholasville, KY 40340

### **Consulting Engineer**

PE Name	Raymond C. Bascom
Firm Name	Haworth, Meyer, & Boleyn, Inc.
Email	rbascom@hmbpe.com
Phone	502-695-9800
Address	HMB Professional Engineers Inc., 3 Hmb Cir Frankfort, KY 40601

## **XII. RECOMMENDATIONS**

KIA staff recommends approval of the loan with the standard conditions.

**CITY OF NICHOLASVILLE  
FINANCIAL SUMMARY (JUNE YEAR END)**

	<u>Audited 2016</u>	<u>Audited 2017</u>	<u>Audited 2018</u>	<u>Projected 2019</u>	<u>Projected 2020</u>	<u>Projected 2021</u>	<u>Projected 2022</u>	<u>Projected 2023</u>
<b>Balance Sheet</b>								
<b>Assets</b>								
Current Assets	7,884,080	6,925,704	6,896,024	7,241,466	7,807,634	8,292,532	8,682,382	9,038,354
Other Assets	82,988,511	81,455,116	85,726,660	84,651,696	86,317,012	85,312,667	83,978,126	82,508,074
<b>Total</b>	<b>90,872,591</b>	<b>88,380,820</b>	<b>92,622,684</b>	<b>91,893,162</b>	<b>94,124,646</b>	<b>93,605,199</b>	<b>92,660,509</b>	<b>91,546,428</b>
<b>Liabilities &amp; Equity</b>								
Current Liabilities	6,431,153	6,426,416	5,675,707	5,704,776	5,869,876	5,994,844	6,119,384	5,885,107
Long Term Liabilities	34,437,514	34,337,952	34,927,203	33,311,513	33,268,202	30,891,198	28,452,653	26,312,586
<b>Total Liabilities</b>	<b>40,868,667</b>	<b>40,764,368</b>	<b>40,602,910</b>	<b>39,016,289</b>	<b>39,138,078</b>	<b>36,886,042</b>	<b>34,572,038</b>	<b>32,197,693</b>
<b>Net Assets</b>	<b>50,003,924</b>	<b>47,616,452</b>	<b>52,019,774</b>	<b>52,876,873</b>	<b>54,986,568</b>	<b>56,719,157</b>	<b>58,088,471</b>	<b>59,348,735</b>
<b>Cash Flow</b>								
Revenues	24,183,693	25,366,117	25,669,651	26,001,495	26,220,522	26,312,854	26,312,854	26,312,854
Operating Expenses	20,704,790	21,210,027	22,280,646	21,796,412	20,893,539	21,060,760	21,231,305	21,405,241
Other Income	266,367	230,975	229,621	229,621	229,621	229,621	229,621	229,621
<b>Cash Flow Before Debt Service</b>	<b>3,745,270</b>	<b>4,387,065</b>	<b>3,618,626</b>	<b>4,434,704</b>	<b>5,556,604</b>	<b>5,481,715</b>	<b>5,311,170</b>	<b>5,137,234</b>
<b>Debt Service</b>								
Existing Debt Service	4,050,386	4,086,663	4,019,442	2,931,229	2,873,766	2,923,156	3,165,354	3,160,808
Proposed KIA Loan	0	0	0	0	0	196,566	196,566	196,566
<b>Total Debt Service</b>	<b>4,050,386</b>	<b>4,086,663</b>	<b>4,019,442</b>	<b>2,931,229</b>	<b>2,873,766</b>	<b>3,119,722</b>	<b>3,361,920</b>	<b>3,357,374</b>
<b>Cash Flow After Debt Service</b>	<b>(305,116)</b>	<b>300,402</b>	<b>(400,816)</b>	<b>1,503,475</b>	<b>2,682,838</b>	<b>2,361,993</b>	<b>1,949,250</b>	<b>1,779,860</b>
<b>Ratios</b>								
Current Ratio	1.2	1.1	1.2	1.3	1.3	1.4	1.4	1.5
Debt to Equity	0.8	0.9	0.8	0.7	0.7	0.7	0.6	0.5
Days Sales in Accounts Receivable	50.2	47.5	49.3	49.3	49.3	49.3	49.3	49.3
Months Operating Expenses in Unrestricted Cash	12.0	10.9	9.6	10.4	11.7	12.9	13.7	14.5
Debt Coverage Ratio	0.9	1.1	0.9	1.5	1.9	1.8	1.6	1.5

<b>EXECUTIVE SUMMARY</b> <b>KENTUCKY INFRASTRUCTURE AUTHORITY</b> <b>FUND F, FEDERALLY ASSISTED DRINKING WATER</b> <b>REVOLVING LOAN FUND</b>		Reviewer Date KIA Loan Number WRIS Number	Meili Sun September 26, 2019 F18-006 Increase WX21155043	
BORROWER	CITY OF LEBANON MARION COUNTY			
<b>BRIEF DESCRIPTION</b>				
<p>This request is for an increase of \$1,855,457 to fund additional work for the Water System Improvements project. During design of project, it became apparent that a number of additional items are necessary to fully achieve the goal of improving water quality for the existing 2,600 customers served by the Lebanon Water Works Company ("LWWC). These items include constructing buildings over the flocculation and sedimentation basin, converting the disinfection system from chlorine gas to liquid sodium hypochlorite, installing an influent flow meter, adding a new sludge loading station and upgrading the electrical and control equipment. The increase will help LWWC save the overall construction cost by completing the project under one contract instead of multiple contracts.</p> <p>This original project was to replace approximately 22,000 linear feet of 2,4 and 6 inch cast iron water main with 6 inch PVC pipe in the western section of the City. The replacement will include service connections to reduce leakage and improve water pressure. Modifications and upgrades will be made at the existing water treatment plant to improve water quality and efficiency. A gravity sludge thickener, a settling basin scraper, and a new fluoride room will be installed. Additionally, 4 existing filter media units will be replaced and energy efficiency improvements will be made to the raw water intake. It will also add a belt press to reduce the amount of discharge and improve discharge water quality.</p>				
<b>PROJECT FINANCING</b>		<b>PROJECT BUDGET</b>		
Fund F Loan	\$4,497,137	RD Fee %	Actual %	
LWWC Reserves	250,000			
		Planning	30,000	
		Eng - Design / Const	6.9% 6.7% 281,797	
		Eng - Insp	4.5% 4.3% 181,000	
		Eng - Other	20,500	
		Construction	3,983,840	
		Contingency	250,000	
<b>TOTAL</b>	<b>\$4,747,137</b>	<b>TOTAL</b>	<b>\$4,747,137</b>	
<b>REPAYMENT</b>	Rate Term	0.50% 30 Years	Est. Annual Payment 1st Payment 6 Mo. after first draw \$134,421	
<b>PROFESSIONAL SERVICES</b>	Engineer Bond Counsel	Kentucky Engineering Group, PLLC Rubin and Hays		
<b>PROJECT SCHEDULE</b>	Bid Opening Construction Start Construction Stop	May-19 Feb-19 Jul-20		
<b>DEBT PER CUSTOMER</b>	Existing Proposed	\$2,229 \$3,348		
<b>OTHER DEBT</b>	See Attached			
<b>RESIDENTIAL RATES</b>	Current Additional	<u>Users</u> 2,596 0	<u>Avg. Bill</u> \$26.19 (for 4,000 gallons) \$26.19 (for 4,000 gallons)	
<b>REGIONAL COORDINATION</b>	This project is consistent with regional planning recommendations.			
<b>CASHFLOW</b>	Cash Flow Before Debt Service	Debt Service	Cash Flow After Debt Service	Coverage Ratio
Audited 2016	1,031,892	401,726	630,166	2.6
Audited 2017	923,114	423,100	500,014	2.2
Audited 2018	614,268	449,894	164,374	1.4
Projected 2019	924,866	497,837	427,029	1.9
Projected 2020	929,050	551,692	377,358	1.7
Projected 2021	872,310	499,457	372,853	1.7
Projected 2022	822,685	633,876	188,809	1.3
Projected 2023	772,155	633,877	138,278	1.2

Reviewer: Meili Sun  
Date: September 26, 2019  
Loan Number: F18-006 Increase

**KENTUCKY INFRASTRUCTURE AUTHORITY  
DRINKING WATER STATE REVOLVING FUND (FUND F)  
CITY OF LEBANON, MARION COUNTY  
PROJECT REVIEW  
WX21155043**

**I. PROJECT DESCRIPTION**

This request is for an increase of \$1,855,457 to fund additional work for the Water System Improvements project. The new total project cost is \$4,747,137. During design phase of the project, it became apparent that a number of additional items are necessary to fully achieve the goal of improving water quality for the existing 2,600 customers served by the Lebanon Water Works Company (“LWWC”). These items include constructing buildings over the flocculation and sedimentation basin, converting the disinfection system from chlorine gas to liquid sodium hypochlorite, installing an influent flow meter, adding a new sludge loading station and upgrading the electrical and control equipment. The increase will help the LWWC save the overall construction cost by completing the project under one contract instead of multiple contracts.

The original project was to replace approximately 22,000 linear feet of 2, 4 and 6 inch cast iron water main with 6 inch PVC pipe in the western section of the City. The existing cast iron piping in this area has been prone to frequent leaks, breaks and service disruptions. The replacement will include service connections to reduce leakage and improve water pressure. Modifications and upgrades will be made at the existing water treatment plant to improve water quality and efficiency. A gravity sludge thickener, a settling basin scraper, and a new fluoride room will be installed. Additionally, 4 existing filter media units will be replaced and energy efficiency improvements will be made to the raw water intake. It will also add a belt press to reduce the amount of discharge and improve discharge water quality.

The LWWC serves approximately 2,600 customers in Marion County. It is a wholesale provider to the Marion County Water District. The latest wholesale rate increase was filed with the Kentucky Public Service Commission (“PSC”) in September, 2017 but disputed by the Marion County Water District. The PSC subsequently ruled over the protest and approved a modified increase in April, 2018.

## II. PROJECT BUDGET

	<u>Total</u>
Planning	\$ 30,000
Engineering – Design	228,275
Engineering – Construction	53,522
Engineering – Inspection	181,000
Engineering – Other	20,500
Construction	3,983,840
Contingency	250,300
<b>Total</b>	<b>\$ 4,747,137</b>

## III. PROJECT FUNDING

	<u>Amount</u>	<u>%</u>
KIA Fund F	\$ 4,497,137	95%
LWVC Local Fund	250,000	5%
<b>Total</b>	<b>\$ 4,747,137</b>	<b>100%</b>

## IV. KIA DEBT SERVICE

Construction Loan	\$ 4,497,137
Principal Forgiveness	1,000,000
Amortized Loan Amount	3,497,137
Interest Rate	0.50%
Loan Term (Years)	30
Estimated Annual Debt Service	\$ 125,678
Administrative Fee (0.25%)	8,743
<b>Total Estimated Annual Debt Service</b>	<b>\$ 134,421</b>

## V. PROJECT SCHEDULE

Bid Opening	May 2019
Construction Start	February 2019
Construction Stop	July 2020

## VI. CUSTOMER COMPOSITION AND RATE STRUCTURE

### A) Customers

Customers	<u>Current</u>
Residential	2,508
Commercial	47
Industrial	41
Total	<u>2,596</u>

## B) Rates

	Water Inside City		
	Current	Prior	Prior
Date of Last Rate Increase	07/08/19	11/15/17	05/20/13
Meter Charge	\$7.35	\$7.35	\$6.75
Per 100 Cubic Feet	3.50	3.35	2.50
1 Cubic Feet = 7.43 Gallons			
Cost for 4,000 gallons	\$26.19	\$25.38	\$20.21
Increase %	3.2%	25.6%	
Affordability Index (Rate/MHI)	1.19%	1.15%	0.92%

	Water Outside City		
	Current	Prior	Prior
Date of Last Rate Increase	07/08/19	11/15/17	05/20/13
Meter Charge	\$8.09	\$8.09	\$7.43
Per 100 Cubic Feet	3.85	3.69	2.75
1 Cubic Feet = 7.43 Gallons			
Cost for 4,000 gallons	\$28.82	\$27.96	\$22.23
Increase %	3.1%	25.7%	
Affordability Index (Rate/MHI)	1.31%	1.27%	1.01%

	Wholesale to MCWD		
	Current	Prior	Prior
Date of Last Rate Increase	07/08/19	04/16/18	07/17/13
Meter Charge	\$7.84	\$7.84	\$6.75
Per 100 Cubic Feet	2.90	2.90	2.50
1 Cubic Feet = 7.43 Gallons			
Cost for 4,000 gallons	\$23.45	\$23.45	\$20.21
Increase %	0.0%	16.0%	

## VII. DEMOGRAPHICS

Based on current Census data from the American Community Survey 5-Year Estimate 2012-2016, the Utility's service area population was 6,144 with a Median Household Income (MHI) of \$26,445. The median household income for the Commonwealth was \$43,740. The project will qualify for a 0.50% interest rate.

Year	Population		County	% Change	County Unemployment	
	City	% Change			Date	Rate
1980	6,590		17,910		June 2005	6.2%
1990	5,695	-13.6%	16,499	-7.9%	June 2010	11.9%
2000	5,718	0.4%	18,212	10.4%	June 2015	5.2%
2010	5,539	-3.1%	19,820	8.8%	June 2017	4.8%
Current	5,604	1.2%	19,497	-1.6%		
Cumulative %		-15.0%		8.9%		

### **VIII. 2017 CAPITALIZATION GRANT EQUIVALENCIES**

- 1) Green Project Reserve - The Drinking Water capitalization grant does not contain a “green” requirement.
- 2) Additional Subsidization - This project qualifies for additional subsidization in the amount of \$1,000,000.

### **IX. FINANCIAL ANALYSIS**

Financial information was obtained from the audited financial statements for the years ended June 30, 2016 through June 30, 2018. The non-cash impacts of GASB 68 – Accounting and Financial Reporting for Pensions and GASB 75 – Other Postemployment Benefit have been removed from the operating expenses. Percentage references in the History section below are based on whole dollar amounts and not the rounded amounts presented.

#### **HISTORY**

Revenues increased 13.6% from \$2.67 million in 2016 to \$3.04 million in 2018 due to previous rate increases. Operating expenses increased 48.0% from \$1.65 million to \$2.44 million during the same period as a result of additional maintenance/repair works, unbudgeted legal fees for the PSC rate case, and the new water purchase agreement with Campbellsville. The debt coverage ratio was 2.6, 2.2, and 1.4 in 2016, 2017, and 2018 respectively.

The balance sheet reflects a current ratio of 1.4, a debt to equity ratio of 1.2, 57.7 days sales in accounts receivable, and 1.9 month operating expenses in unrestricted cash.

## PROJECTIONS

Projections are based on the following assumptions:

- 1) Total revenues will go up approximately 16% by 2020 due to a combination of previously approved retail and wholesale rate increases.
- 2) Water purchase costs will increase 175% by 2023 to meet the quantity requirement of the Campbellsville service agreement.
- 3) Operating expenses will be reduced by approximately \$170,000 excluding non-recurring legal, insurance, and miscellaneous expenses. A 2% annual increase will be applied to the projection for general inflation.
- 4) Debt service coverage is 1.3 in 2022 when full year principal and interest repayments are expected to begin.

Based on the pro forma assumptions, the utility shows adequate cash flow to repay the KIA Fund F loan.

## REPLACEMENT RESERVE

The replacement reserve will be 5% (\$238,000 total) of the final amount borrowed to be funded annually (\$11,900 yearly) each December 1 for 20 years and maintained for the life of the loan.

## X. DEBT OBLIGATIONS

	<u>Outstanding</u>	<u>Maturity</u>
KIA Note B08-09	\$ 378,738	2030
KIA Note F15-057	669,659	2036
KIA Note F14-036 i.a.o. \$2,261,000	1,667,628	TBD
CNB Note, 2012	2,961,535	2030
CNB Note, 2013	109,253	2020
	<b>\$ 5,786,813</b>	

## XI. CONTACTS

<b>Legal Applicant</b>	
Name	City of Lebanon
Address	PO Box 840 Lebanon, KY 40033
County	Marion
Authorized Official	Gary D. Crenshaw, Mayor
Phone	(270) 692-6272
Email	gdcrenshaw@windstream.net



<b>Project Contact - Applicant</b>	
Name	Daren Thompson
Organization	Lebanon Water Works Company
Address	120 S Proctor Knott Ave Lebanon, KY 40033
Phone	(270) 692-2491
Email	daren.thompson@lebanonwaterworks.com

<b>Project Administrator</b>	
Name	Holly Nicholas
Organization	Kentucky Engineering Group, PLLC
Address	PO Box 1034 Versailles, KY 40383
Phone	(859) 333-9742
Email	hnicholas@kyengr.com

<b>Consulting Engineer</b>	
Name	James C. Thompson
Firm	Kentucky Engineering Group, PLLC
Address	161 North Locust Street Versailles, KY 40383
Phone	(859) 251-4127
Email	jthompson@kyengr.com

**XII. RECOMMENDATIONS**

KIA staff recommends approval of the loan with the standard conditions.

**CITY OF LEBANON**  
**FINANCIAL SUMMARY (JUNE YEAR END)**

	<u>Audited</u> <u>2016</u>	<u>Audited</u> <u>2017</u>	<u>Audited</u> <u>2018</u>	<u>Projected</u> <u>2019</u>	<u>Projected</u> <u>2020</u>	<u>Projected</u> <u>2021</u>	<u>Projected</u> <u>2022</u>	<u>Projected</u> <u>2023</u>
<b>Balance Sheet</b>								
<b>Assets</b>								
Current Assets	1,190,292	1,315,012	1,106,450	1,218,414	1,264,350	1,301,635	1,320,516	1,334,344
Other Assets	11,653,477	14,134,160	14,371,184	13,919,470	13,456,971	17,630,777	16,891,805	16,107,356
<b>Total</b>	<b>12,843,769</b>	<b>15,449,172</b>	<b>15,477,634</b>	<b>15,137,884</b>	<b>14,721,321</b>	<b>18,932,412</b>	<b>18,212,321</b>	<b>17,441,700</b>
<b>Liabilities &amp; Equity</b>								
Current Liabilities	561,868	625,652	797,732	875,399	839,887	972,875	989,785	1,008,948
Long Term Liabilities	5,279,079	6,918,807	7,569,849	7,647,073	7,257,195	10,238,865	9,714,088	9,177,848
<b>Total Liabilities</b>	<b>5,840,947</b>	<b>7,544,459</b>	<b>8,367,581</b>	<b>8,522,472</b>	<b>8,097,081</b>	<b>11,211,740</b>	<b>10,703,873</b>	<b>10,186,796</b>
<b>Net Assets</b>	<b>7,002,822</b>	<b>7,904,713</b>	<b>7,110,053</b>	<b>6,615,412</b>	<b>6,624,240</b>	<b>7,720,672</b>	<b>7,508,448</b>	<b>7,254,904</b>
<b>Cash Flow</b>								
Revenues	2,674,904	2,708,423	3,039,614	3,477,615	3,529,185	3,529,185	3,529,185	3,529,185
Operating Expenses	1,654,789	1,794,032	2,444,908	2,572,311	2,619,697	2,676,437	2,726,062	2,776,592
Other Income	11,777	8,723	19,562	19,562	19,562	19,562	19,562	19,562
<b>Cash Flow Before Debt Service</b>	<b>1,031,892</b>	<b>923,114</b>	<b>614,268</b>	<b>924,866</b>	<b>929,050</b>	<b>872,310</b>	<b>822,685</b>	<b>772,155</b>
<b>Debt Service</b>								
Existing Debt Service	401,726	423,100	449,894	497,837	551,692	499,457	499,455	499,456
Proposed KIA Loan F18-006	0	0	0	0	0	0	134,421	134,421
<b>Total Debt Service</b>	<b>401,726</b>	<b>423,100</b>	<b>449,894</b>	<b>497,837</b>	<b>551,692</b>	<b>499,457</b>	<b>633,876</b>	<b>633,877</b>
<b>Cash Flow After Debt Service</b>	<b>630,166</b>	<b>500,014</b>	<b>164,374</b>	<b>427,029</b>	<b>377,358</b>	<b>372,853</b>	<b>188,809</b>	<b>138,278</b>
<b>Ratios</b>								
Current Ratio	2.1	2.1	1.4	1.4	1.5	1.3	1.3	1.3
Debt to Equity	0.8	1.0	1.2	1.3	1.2	1.5	1.4	1.4
Days Sales in Accounts Receivable	49.9	48.1	57.7	57.7	57.7	57.7	57.7	57.7
Months Operating Expenses in Unrestricted Cash	4.6	4.8	1.9	2.0	2.1	2.3	2.3	2.3
Debt Coverage Ratio	2.6	2.2	1.4	1.9	1.7	1.7	1.3	1.2