# Kentucky Infrastructure Authority Projects for August 2018 Capital Projects Meeting

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	Loan #	Borrower	<u>Loa</u>	n Amount	County
	A18-005	Regional Water Resource Agency (with P&D loan)	\$	4,595,262	Daviess
•	Fund B Loan				
	<u>Loan #</u> B17-013	Borrower City of Mayfield f/b/o Mayfield Electric and Water Systems	<u>Loa</u> \$	<u>n Amount</u> 849,000	County Graves
•	Fund C Loan				
	<u>Loan #</u> C18-001	Borrower City of Bowling Green f/b/o Bowling Green Municipal Utilities (Increase)	<u>Loa</u> \$	<u>n Amount</u> 4,540,000	<u>County</u> Warren

EXECUTIVE SUMMARY
KENTUCKY INFRASTRUCTURE AUTHORITY
FUND A, FEDERALLY ASSISTED WASTEWATER
REVOLVING LOAN FUND

Reviewer Date KIA Loan Number WRIS Number Melissa Rife July 10, 2018 A18-005 SX21059027

BORROWER

REGIONAL WATER RESOURCE AGENCY DAVIESS COUNTY

#### **BRIEF DESCRIPTION**

The Ravines Sewer Upgrade project will reconstruct and upgrade the Ravine Interceptor Sewer that conveys combined sewage in the north central portion of Owensboro's combined sewer system. The project is designed to separate storm water and wastewater into separate pipes conveying storm water away and out of the combined sewer system. The separation will result in CSS lines being replaced with SSS and storm lines. The storm water contribution to the combined sewer overflow located at Locust Street will be greatly reduced.

PROJECT FINANCING		PROJECT BUDGET	RD Fee %	Actual %	
Fund A Loan KIA P&D Loan (A16-026)	\$4,180,262 \$415,000	Administrative Expens Legal Expenses Land, Easements Eng - Design / Const Eng - Insp Eng - Other Construction Contingency	6.9% 3.7%		\$50,000 40,000 20,000 264,718 139,342 100,000 3,619,275 361,927
TOTAL	\$4,595,262	TOTAL		_	\$4,595,262
REPAYMENT	Rate Term	1.75% 20 Years	Est. Annual Pay 1st Payment	ment 6 Mo. after fir	\$282,497 rst draw
PROFESSIONAL SERVICES	Engineer Bond Counsel	Cannon & Cannon, In Dinsmore & Shohl, LL			
PROJECT SCHEDULE	Bid Opening Construction Start Construction Stop	June 2018 August 2018 August 2020			
DEBT PER CUSTOMER	Existing Proposed	\$940 \$1,400			
OTHER DEBT		See Attached			
RESIDENTIAL RATES		<u>Users</u>	Avg. Bill		

#### **REGIONAL COORDINATION**

Current

This project is consistent with regional planning recommendations.

30,410

\$37.29 (for 4,000 gallons)

CASHFLOW	Cash Flow Before Debt Service	Debt Service	Cash Flow After Debt	Coverage Retio
CASHFLOW	Debt Service		Service	Coverage Ratio
Audited 2014	4,517,894	2,787,456	1,730,438	1.6
Audited 2015	5,372,723	2,957,026	2,415,697	1.8
Audited 2016	7,776,746	3,177,474	4,599,272	2.4
Audited 2017	8,492,271	2,768,067	5,724,204	3.1
Projected 2018	8,821,079	3,064,332	5,756,747	2.9
Projected 2019	9,041,557	3,195,033	5,846,525	2.8
Projected 2020	9,239,430	3,769,885	5,469,546	2.5
Projected 2021	9,416,097	4,528,902	4,887,195	2.1
Projected 2022	9,572,752	4,517,907	5,054,845	2.1

Reviewer: Melissa Rife

Date: July 10, 2018

Loan Number: A18-005

# KENTUCKY INFRASTRUCTURE AUTHORITY WASTEWATER REVOLVING LOAN FUND (FUND A) REGIONAL WATER RESOURCE AGENCY, DAVIESS COUNTY PROJECT REVIEW SX21059027

# I. PROJECT DESCRIPTION

The Regional Water Resource Agency (RWRA) is requesting Fund A loan in the amount of \$4,595,262 for the Ravines Sewer Upgrade project. This loan includes KIA Planning & Design Loan A16-026 in the amount of \$415,000 (approved by the KIA Board on April 7, 2016).

This is the third phase of up and down stream improvements and storm/sanitary separation improvements within this watershed. The Ravines Sewer Upgrade project involves the reconstruction and upgrade of the Ravine Interceptor Sewer that conveys combined sewage in the north central portion of Owensboro's combined sewer system. The project is designed to separate storm water and wastewater into separate pipes conveying storm water away and out of the combined sewer system. The separation will result in CSS lines being replaced with SSS and storm lines. The storm water contribution to the combined sewer overflow located at Locust Street will be greatly reduced.

The Ravine Sewer was originally constructed the former ditch located in the northern portion of the combined sewer system referred to as "The Ravine." The line runs in a diagonal path across several city blocks. The original line does not contain dedicated easements to prevent construction above the pipe. This creates the potential to damage the structures if the line becomes compromised. The condition of this line is unstable. There are various sections of the pipe with structural issues, including improper pipe sizing when originally installed. The new lines will be in the same ditch and will be offset to adequately facilitate future replacements and repairs. Original lines will either be removed or safe loaded.

# II. PROJECT BUDGET

	Total		
Administrative Expenses	\$	50,000	
Legal Expenses		40,000	
Land, Easements		20,000	
Engineering Fees – Design		205,000	
Engineering Fees – Construction		59,718	
Engineering Fees – Inspection		139,342	
Engineering Fees – Other		100,000	
Construction		3,619,275	
Contingency		361,927	
Total	\$	4,595,262	

# III. PROJECT FUNDING

	Amount		%	
Fund A Loan	\$	4,180,262	91%	-
KIA P&D Loan (A16-026)		415,000	9%	
Total	\$	4,595,262	100%	•

# IV. KIA DEBT SERVICE

Construction Loan	\$ 4,180,262
KIA P&D Loan (A16-026)	415,000
Less: Principal Forgiveness	0
Amortized Loan Amount	\$ 4,595,262
Interest Rate	1.75%
Loan Term (Years)	20
Estimated Annual Debt Service	\$ 273,306
Administrative Fee (0.20%)	9,191
Total Estimated Annual Debt Service	\$ 282,497

# V. PROJECT SCHEDULE

Bid Opening June 2018
Construction Start August 2018
Construction Stop August 2020

# VI. CUSTOMER COMPOSITION AND RATE STRUCTURE

# A) Customers

Customers	Current	Total
Residential	27,520	27,520
Commercial	2,803	2,803
Industrial	87	87
Total	30,410	30,410

# B) Rates

_	Cu	rrent	Р	rior	Р	rior
Date of Last Rate Increase	0	7/01/17	0	7/01/16	0	1/01/16
Minimum	\$	14.05	\$	12.95	\$	11.95
Each additional 1,000 gallons		4.39		4.39		4.39
Environmental Improvement Charge Capacity Fee		5.15 0.53		3.95		2.95
Cost for 4,000 gallons	\$	37.29	\$	34.46	\$	32.46
Increase %		8.2%		6.2%		
Affordability Index (Rate/MHI)		1.1%		1.1%		

RWRA has rate adjustments planned through 2021. All rate increases have been included in this analysis.

# VII. <u>DEMOGRAPHICS</u>

Based on current Census data from the American Community Survey 5-Year Estimate 2012-2016, the Utility's service area population was 72,417 with a Median Household Income (MHI) of \$41,810. The median household income for the Commonwealth is \$43,740. The project will qualify for a 1.75% interest rate.

		Population			Unemp	loyment
Year	City	% Change	County	% Change	Date	Rat e
1980	54,450		85,949		June 2005 June	6.3%
1990	53,549	-1.7%	87,189	1.4%	2010 June	9.2%
2000	54,067	1.0%	91,545	5.0%	2015 June	4.9%
2010	57,265	5.9%	96,656	5.6%	2017	5.3%
Current	58,685	2.5%	98,724	2.1%		
Cumulative %		7.8%		14.9%		

#### VIII. 2017 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 06/30/14 through 06/30/17. The non-cash impact of GASB 68, Accounting and Financial Reporting for Pensions, has been removed from fiscal 2016 operating expenses (\$576,572) and fiscal 2017 operating expenses (\$705,575). Percentage references in the History section below are based on whole dollar amounts and not the rounded amounts presented.

#### **HISTORY**

Revenues increased approximately 33% from \$16.1 million to \$21.4 million from 2014 to 2017 while operating expenses increased 11.5% from \$12.0 million to \$13.3 million. Cash flow available for debt service was \$4.5 million, \$5.3 million, \$7.8 million, and \$8.5 million in 2014, 2015, 2016, and 2017 respectively, while the debt coverage ratio was 1.6, 1.8, 2.4, and 3.1.

The 2017 balance sheet reflects a current ratio of 3.2, debt to equity ratio of 0.8, and 33.3 days sales in accounts receivable.

#### **AUDIT INFORMATION**

#### Opinion:

2014 Unqualified

2015 Unqualified

2016 Unqualified

2017 Unqualified

# Internal Control Over Financial Reporting:

2014	Auditor did not identify any deficiencies in internal controls.
2015	Auditor did not identify any deficiencies in internal controls.
2016	Auditor did not identify any deficiencies in internal controls.
2017	Auditor did not identify any deficiencies in internal controls.

# Compliance and Other Matters:

2014	Auditor's tests did not disclose any instances of noncompliance or other matters
	required to be reported under Governmental Auditing Standards.

- Auditor's tests did not disclose any instances of noncompliance or other matters required to be reported under Governmental Auditing Standards.
- Auditor's tests did not disclose any instances of noncompliance or other matters required to be reported under Governmental Auditing Standards.
- Auditor's tests did not disclose any instances of noncompliance or other matters required to be reported under Governmental Auditing Standards.

#### **PROJECTIONS**

Projections are based on the following assumptions:

- 1) Revenues will increase according to the rate plan established by RWRA through 2021.
- 2) Operating expenses will increase 2% annually for inflation.
- 3) Debt service coverage is 2.1 in 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 loan.

#### REPLACEMENT RESERVE

The current replacement reserve account of \$2,500,000 is adequate to cover reserves for all KIA loans. No additional reserves will be required as a result of this loan.

# X. <u>DEBT OBLIGATIONS</u>

	 Outstanding	Maturity
2016 Series A Revenue Bonds	\$ 2,350,000	2027
KIA A99-04	8,538,288	2023
KIA A06-02	3,968,930	2027
KIA A07-08	854,203	2028
KIA A10-13	5,347,123	2032
KIA A12-14	332,895	2033
KIA A12-15	2,283,955	2033
KIA A13-017	813,208	2035
KIA A13-028	809,775	2035
KIA A14-008	331,439	2035
City of Owensboro (JSA Improvements)	681,552	2035
KIA A15-002 (i/a/o \$8,007,500)	0	TBD
KIA A15-027 (i/a/o \$1,425,000)	219,174	TBD
KIA A15-099 (i/a/o \$3,566,001)	1,960,589	TBD
KIA A16-026 P&D (i/a/o \$415,000)	75,499	TBD
KIA A16-082 PTP Loan (i/a/o \$200,000)	0	TBD
KIA B17-014 (i/a/o \$500,000)	0	TBD
KIA B17-015 (i/a/o \$485,000)	0	TBD
KIA A18-005 (i/a/o \$4,180,262)	0	TBD
KIA A18-007 (i/a/o \$2,047,000)	0	TBD
KIA A18-026 (i/a/o \$5,619,274)	0	TBD
Total	\$ 28,566,630	

# XI. CONTACTS

Legal Applicant	
Entity Name	Regional Water Resource Agency
Authorized Official	Joseph G. Schepers, Executive Director
County	Daviess
Email	schepersjg@rwra.org
Phone	(270) 687-8440
Address	1722 Pleasant Valley Road
	Owensboro, KY 42303

**Applicant Contact** 

Name Joseph G. Schepers, Executive Director

Organization Regional Water Resource Agency

Email schepersjg@rwra.org

Phone (270) 687-8440

Address 1722 Pleasant Valley Road

Owensboro, KY 42303

**Project Administrator** 

Name Brad Alley

Organization GRADD

Email bradalley@gradd.com

Phone (270) 926-4433 Address 300 GRADD Way

Owensboro, KY 42301

**Consulting Engineer** 

PE Name Jeffrey Thomas Lashlee

Firm Name Cannon & Cannon, Inc.

Email jlashlee@cannon-cannon.com

Phone (270) 843-2744

Address 2501 Crossings Blvd.; Suite 203

Bowling Green, KY 42104

# XII. <u>RECOMMENDATIONS</u>

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

# REGIONAL WATER RESOURCE AGENCY FINANCIAL SUMMARY (June YEAR END)

T INANOIAL SOMMANT (SUME TEAN END)	Audited 2014	Audited 2015	Audited 2016	Audited 2017	Projected 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022
Balance Sheet	2017	20.0	2010	2011	2010	20.0	2020	2021	
Assets									
Current Assets	6,600,476	8,684,574	10,735,081	15,074,573	15,708,114	16,337,666	16,927,921	17,458,540	18,004,625
Other Assets	72,739,995	73,766,013	75,927,345	78,631,149	82,479,963	95,511,094	102,775,449	102,160,124	
Total	79,340,471	82,450,587	86,662,426	93,705,722	98,188,077	111,848,760		119,618,665	
Total	73,340,471	02,430,307	00,002,420	33,703,722	30,100,077	111,040,700	119,700,070	119,010,000	113,700,310
Liabilities & Equity									
Current Liabilities	3,613,418	4,069,830	4,120,209	4,649,222	4,719,336	4,781,473	4,844,510	4,903,449	4,935,949
Long Term Liabilities	28,153,489	33,887,218	34,208,359	35,516,645	36,658,967	46,411,342	50,861,705	48,079,364	45,297,023
Total Liabilities	31,766,907	37,957,048	38,328,568	40,165,867	41,378,303	51,192,815	55,706,215	52,982,813	50,232,972
Net Assets	47,573,564	44,493,539	48,333,858	53,539,855	56,809,774	60,655,945	63,997,155	66,635,852	69,467,338
Cash Flow	16 101 700	17 607 F60	10 640 014	24 407 420	22.042.267	22 F24 <b>7</b> 12	22 000 002	22.460.644	02 044 002
Revenues Operating Expenses	16,121,783 11,960,694	17,687,562	19,642,314	21,407,439	22,042,267 13,598,377	22,534,712	23,009,992 14,147,751	23,469,614 14,430,706	23,914,883
Operating Expenses Other Income	356,805	12,711,388 396,549	12,613,885 748,317	13,331,742 416,574	377,189	13,870,344 377,189	377,189	377,189	14,719,320 377,189
		•			-	•		•	
Cash Flow Before Debt Service	4,517,894	5,372,723	7,776,746	8,492,271	8,821,079	9,041,557	9,239,430	9,416,097	9,572,752
Debt Service									
Existing Debt Service	2,787,456	2,957,026	3,177,474	2,768,067	3,064,332	3,195,033	3,769,885	4,246,405	4,235,410
Proposed KIA Loan	0	0	0	0	0	0	0	282,497	282,497
Total Debt Service	2,787,456	2,957,026	3,177,474	2,768,067	3,064,332	3,195,033	3,769,885	4,528,902	4,517,907
Cash Flow After Debt Service	1,730,438	2,415,697	4,599,272	5,724,204	5,756,747	5,846,525	5,469,546	4,887,195	5,054,845
Ratios									
Current Ratio	1.8	2.1	2.6	3.2	3.3	3.4	3.5	3.6	3.6
Debt to Equity	0.7	0.9	0.8	0.8	0.7	0.8	0.9	0.8	0.7
Days Sales in Accounts Receivable	32.7	32.0	33.1	33.3	33.3	33.3	33.3	33.3	33.3
Months Operating Expenses in Unrestricted Cash	3.5	4.9	6.4	9.7	10.0	10.3	10.6	10.8	11.0
Debt Coverage Ratio	1.6	1.8	2.4	3.1	2.9	2.8	2.5	2.1	2.1

EXECUTIVE SUMMARY
KENTUCKY INFRASTRUCTURE AUTHORITY
FUND B, INFRASTRUCTURE
REVOLVING LOAN FUND

Reviewer Ashley Adams
Date June 1, 2017
KIA Loan Number B17-013
WRIS Number SX21083058
WX21083041

BORROWER CITY OF MAYFIELD F/B/O MAYFIELD ELECTRIC AND WATER SYSTEMS GRAVES COUNTY

#### **BRIEF DESCRIPTION**

This loan will fund a wastewater project as well as a drinking water project that are already under construction. The wastewater portion will replace two screw pumps at the Mayfield Wastewater Treatment plant that have not had major rehabilitation since they were installed in the early 1990s. The drinking water portion of the project will construct two new water wells at the Mayfield Water Treatment Plant. The current wells have reached their daily capacity.

PROJECT FINANCING		PROJECT BUDGET	RD Fee %	Actual %	
Fund B Loan	\$849,000	Eng - Design / Const Eng - Insp Construction Contingency	11.8% 9.8%		36,000 6,000 769,000 38,000
TOTAL	\$849,000	TOTAL		•	\$849,000
REPAYMENT	Rate Term	0.25% 20 Years	Est. Annual Paymo	ent 6 Mo. after	\$45,245 first draw
PROFESSIONAL SERVICES	Engineer Bond Counsel	Water Management S Dinsmore & Shohl, LL	-		
PROJECT SCHEDULE	Bid Opening Construction Start Construction Stop	Drinking Water Nov-16 Aug-17 Sep-17	Wastewater Oct-16 Feb-17 May-17		
DEBT PER CUSTOMER	Existing Proposed	\$140 \$590			
OTHER DEBT		See Attached			
OTHER STATE-FUNDED PRO	JECTS LAST 5 YRS	See Attached			
RESIDENTIAL RATES	Current - Water Current - Sewer	<u>Users</u> 4,917 4,480	<u>Avg. Bill</u> \$15.43 \$21.16	` '	

#### REGIONAL COORDINATION This project is consistent with regional planning recommendations.

	Cash Flow Before			
CASHFLOW	Debt Service	Debt Service	Cash Flow After Debt Service	Coverage Ratio
Audited 2014	389,717	218,984	170,733	1.8
Audited 2015	770,402	99,642	670,760	7.7
Audited 2016	1,031,961	51,219	980,742	20.1
Projected 2017	1,115,006	26,043	1,088,963	42.8
Projected 2018	1,208,029	145,743	1,062,287	8.3
Projected 2019	1,309,687	168,321	1,141,366	7.8
Projected 2020	1,418,318	168,275	1,250,043	8.4
Projected 2021	1,522,427	168,230	1,354,197	9.0

Reviewer: Ashley Adams

Date: June 1, 2017

Loan Number: B17-013

# KENTUCKY INFRASTRUCTURE AUTHORITY INFRASTRUCTURE REVOLVING LOAN FUND (FUND "B") CITY OF MAYFIELD F/B/O MAYFIELD ELECTRIC & WATER SYSTEMS, GRAVES COUNTY PROJECT REVIEW SX21083058/WX21083041

# I. PROJECT DESCRIPTION

The City of Mayfield f/b/o Mayfield Electric & Water Systems is requesting a Fund B loan in the amount of \$849,000 for the Wastewater Treatment Plant - Screw Pump Replacement & Water Treatment Plant - New Water Well projects. This loan will fund a wastewater project as well as a drinking water project. The wastewater portion will replace two screw pumps at the Mayfield Wastewater Treatment plant that have not had major rehabilitation since they were installed in the early 1990s. The headworks will be expanded to treat a 12 MGD peak flow with headworks modifications including screening, grit removal, and influent and effluent piping modifications. The drinking water portion of the project will construct two new water wells at the Mayfield Water Treatment Plant. The current wells have reached their daily capacity.

# II. PROJECT BUDGET

	Total	
Engineering Fees - Design / Const	\$	36,000
Engineering Fees - Inspection		6,000
Construction		769,000
Contingency		38,000
Total	\$	849,000

# **III. PROJECT FUNDING**

Total	\$ 849,000	100%	
Fund B Loan	\$ 849,000	100%	
	Amount	%	

# IV. KIA DEBT SERVICE

Amortized Loan Amount	\$ 849,000
Interest Rate	0.25%
Loan Term (Years)	20
Estimated Annual Debt Service	\$ 43,547
Administrative Fee (0.20%)	1,698
<b>Total Estimated Annual Debt Service</b>	\$ 45,245

# V. PROJECT SCHEDULE

# **Drinking Water**

Bid Opening November 2016
Construction Start March 2017
Construction Stop September 2017

# Wastewater

Bid Opening October 2016
Construction Start February 2017
Construction Stop May 2017

# VI. RATE STRUCTURE

# A. Customers

Customers	Water	Sewer
Residential	4,259	3,902
Commercial	658	578
Total	4,917	4,480

# B. Rates

	Inside	e City	Outside City		
Water	Future	Current	Future	Current	
Date of Last Rate Increase	01/01/18	01/01/17	01/01/18	01/01/17	
Minimum	\$9.01	\$8.50	\$12.68	\$11.96	
Next 2,000 Gallons/1,000	3.67	3.46	5.51	5.19	
Cost for 4,000 gallons	\$16.35	\$15.43	\$23.69	\$22.35	
Increase %	6.0%	6.0%	6.0%	6.0%	
Affordability Index (Rate/MHI)	0.8%	0.7%	1.1%	1.0%	

	Inside	e City	Outside City		
Sewer	Future	Current	Future	Current	
Date of Last Rate Increase	01/01/18	01/01/17	09/01/17	09/01/16	
Minimum	\$11.01	\$10.79	\$12.80	\$11.64	
Next 2,000 Gallons/1,000	5.50	5.40	6.40	5.82	
Cost for 4,000 gallons	\$22.02	\$21.58	\$25.60	\$23.28	
Increase %	2.0%	2.0%	10.0%	10.0%	
Affordability Index	1.0%	1.0%	1.2%	1.1%	
(Rate/MHI)					

Rates for inside city and outside city water will increase 6% annually through January 2021. Rates for inside city sewer will increase 2% through January 2021. Rates for outside city sewer will increase 10% through July 2020. All rates will be reevaluated at the end of these time periods.

# VII. DEMOGRAPHICS

Based on current Census data from the American Community Survey 5-Year Estimate 2010-2014, the Utility's service area population was 10,707 with a Median Household Income (MHI) of \$25,589. The median household income for the Commonwealth is \$43,342. The project will qualify for a 0.25% interest rate.

Population					Cour Unemplo	
Year	City	% Change	County	% Change	Date	Rate
1980	10,705		34,049		June 2005	10.7%
1990	9,935	-7.2%	33,550	-1.5%	June 2010	9.2%
2000	10,349	4.2%	37,028	10.4%	June 2015	6.2%
2010	10,024	-3.1%	37,121	0.3%	June 2016	6.3%
Current	10,091	0.7%	37,451	0.9%		
Cumulative %		-5.7%		10.0%		

#### VIII. FINANCIAL ANALYSIS

Financial information was obtained from the audited financial statements of the Water and Sewer funds for years ended June 30, 2014 through June 30, 2016. The non-cash impact of GASB 68, Accounting and Financial Reporting for Pensions, has been removed from fiscal 2016 operating expenses (\$189 thousand). Percentage references in the History section below are based on whole dollar amounts and not the rounded amounts presented.

#### **HISTORY**

Revenues increased 19% from \$3.2 million in 2014 to \$3.8 million in 2016 due to multiple rate increases. Operating expenses decreased 2% from \$2.7 million to \$2.6 million during the same time period. The debt coverage ratio was 1.8, 7.7, and 20.1 from 2014 to 2016, respectively.

The balance sheet reflects a current ratio of 0.9, a debt to equity ratio of 0.6, and unrestricted cash equals 1.2 months of operating expenses. Days sales in accounts receivable (collection period) is not reported in this presentation because A/R is reported in the electric fund balance sheet and not available specifically for the water/sewer funds.

#### **PROJECTIONS**

Projections are based on the following assumptions:

- 1) Water and sewer revenues will be flat for volume but increase steadily through 2021 to reflect multiple rate increases approved in 2016.
- 2) Expenses will increase 2% annually for inflation.
- 3) Debt service coverage is 7.8 in 2019 when full principal and interest repayments begin.

Based on the proforma assumptions, the utility shows adequate cash flow to repay the KIA Fund B loan.

#### REPLACEMENT RESERVE

The annual replacement cost is \$2,100. This amount should be added to the replacement account each December 1 until the balance reaches \$42,000 and maintained for the life of the loan.

#### IX. <u>DEBT OBLIGATIONS</u>

Total	\$	687,538	
KIA Loan (C16-001) (i/a/o \$1,410,530)			
FNB Bank (LOC)		345,876	2017
KIA Loan (A209-13)	\$	341,662	2031
	<u> </u>	ıtstanding	Maturity

# X. OTHER STATE OR FEDERAL FUNDING IN PAST FIVE YEARS

None

# XI. CONTACTS

Legal Applicant

Name Mayfield Electric and Water Systems

Address 301 East Broadway

Mayfield, KY 42066

County Graves

Authorized Official Kevin Leonard, Water & Wastewater Manager

Phone 270-247-4661

Email kleonard@mewsbb.com

**Project Administrator** 

Name Kevin Leonard

Title Water & Wastewater Manager

Organization Mayfield Electric and Water Systems

Email kleonard@mewsbb.com

Phone 270-247-4661

Address 301 East Broadway

Mayfield, KY 42066

**Consulting Engineer** 

Name Joe Hinkle

Firm Water Management Systems
Address 2 International Plaza, Suite 1

Nashville, TN 37217

Phone 615-366-6088

Email jhinkle@wmsengineers.com

# XII. <u>RECOMMENDATIONS</u>

KIA staff recommends approval of the loan with the standard.

# CITY OF MAYFIELD F/B/O MAYFIELD ELECTRIC AND WATER SYSTEMS FINANCIAL SUMMARY (JUNE YEAR END)

FINANCIAL SUMMART (JUNE TEAR END)	Audited	Audited	Audited	Projected	Projected	Projected	Projected	Projected
	2014	2015	2016	2017	2018	2019	2020	2021
Balance Sheet								
Assets								
Current Assets	459,941	684,690	1,096,572	1,314,365	1,526,822	1,755,095	2,005,104	2,275,943
Other Assets	10,108,750	10,230,619	10,961,053	12,304,182	13,620,386	14,129,627	14,725,811	15,405,317
Total =	10,568,691	10,915,309	12,057,625	13,618,547	15,147,208	15,884,723	16,730,915	17,681,261
Liabilities & Equity								
Current Liabilities	1,368,019	1,267,204	1,168,137	1,189,081	1,210,703	1,232,725	1,255,150	1,278,077
Long Term Liabilities	470,731	2,638,325	3,410,310	4,241,495	5,064,774	5,038,830	5,012,662	4,986,266
Total Liabilities	1,838,750	3,905,529	4,578,447	5,430,576	6,275,477	6,271,555	6,267,812	6,264,343
Net Assets	8,729,941	7,009,780	7,479,178	8,187,971	8,871,731	9,613,167	10,463,103	11,416,918
Cash Flow								
Revenues	3,146,574	3,317,970	3,733,669	3,876,428	4,026,390	4,183,984	4,349,670	4,511,975
Operating Expenses	2,747,627	2,537,892	2,688,188	2,747,902	2,804,841	2,860,777	2,917,832	2,976,028
Other Income	(9,230)	(9,676)	(13,520)	(13,520)	(13,520)	(13,520)	(13,520)	(13,520)
Cash Flow Before Debt Service	389,717	770,402	1,031,961	1,115,006	1,208,029	1,309,687	1,418,318	1,522,427
Debt Service								
Existing Debt Service	218,984	99,642	51,219	26,043	123,120	123,076	123,030	122,985
Proposed KIA Loan	0	0	0	0	22,623	45,245	45,245	45,245
Total Debt Service	218,984	99,642	51,219	26,043	145,743	168,321	168,275	168,230
Cash Flow After Debt Service	170,733	670,760	980,742	1,088,963	1,062,287	1,141,366	1,250,043	1,354,197
Ratios								
Current Ratio	0.3	0.5	0.9	1.1	1.3	1.4	1.6	1.8
Debt to Equity	0.2	0.6	0.6	0.7	0.7	0.7	0.6	0.5
Months Operating Expenses in Unrestricted Cash	0.1	0.5	1.2	2.1	3.0	3.9	4.8	5.8
Debt Coverage Ratio	1.8	7.7	20.1	42.8	8.3	7.8	8.4	9.0

EXECUTIVE SUMMARY
KENTUCKY INFRASTRUCTURE AUTHORITY
FUND C, GOVERNMENTAL AGENCIES FUND
REVOLVING LOAN FUND

Reviewer Date KIA Loan Number WRIS Number Ashley Adams August 2, 2018 C18-001 (Increase) WX21227087

BORROWER	CITY OF BOWLING GREEN
	WARREN COUNTY

#### **BRIEF DESCRIPTION**

This is an increase to a loan approved by the board on September 1, 2017. The increase is needed to fund added scope to the project design (addition of residuals basin and piping as well as modifications to the chemical feed system).

Original Project Description: This loan will fund the engineering fees portion of a larger water treatment plant expansion project that will be financed by bonds. The larger construction project will address growth in the City and County. This project includes the addition of a filter building with ten filters, two flash mix units, four flocculation and sedimentation basins, and expansion of an existing raw water pump station.

PROJECT FINANCING		PROJECT BUDGET	RD Fee %	Actual %	
Fund C Loan Bonds	\$4,540,000 42,000,000	Planning Eng - Design / Const Eng - Insp Construction Contingency	6.4% 4.0%	7.8% 2.6%	138,026 3,271,461 1,080,000 42,000,000 50,513
TOTAL	\$46,540,000	TOTAL			\$46,540,000
REPAYMENT	Rates Term	3.00% 20 Years	Est. Annual Payme 1st Payment	nt 6 Mo. after	\$ 312,598 first draw
PROFESSIONAL SERVICES	Engineer Bond Counsel	Smith Seckman Reid Dinsmore & Shohl, Ll			
PROJECT SCHEDULE	Bid Opening Construction Start Construction Stop	Nov-18 Jan-19 Jan-22			
DEBT PER CUSTOMER	Existing Proposed	\$2,966 \$4,330			
OTHER DEBT		See Attached			
OTHER STATE-FUNDED PRO	JECTS LAST 5 YRS	See Attached			
RESIDENTIAL RATES	Current Additional	<u>Users</u> 22,032 0		(for 4,000 g (for 4,000 g	

REGIONAL COORDINATION This project is consistent with regional planning recommendations.

	Cash Flow Before			
CASHFLOW	Debt Service	Debt Service	Cash Flow After Debt Service	Coverage Ratio
Audited 2015	8,801,606	5,351,320	3,450,286	1.6
Audited 2016	9,763,600	5,366,938	4,396,662	1.8
Audited 2017	10,371,205	5,400,866	4,970,339	1.9
Projected 2018	11,934,080	5,280,548	6,653,532	2.3
Projected 2019	13,262,213	5,726,120	7,536,093	2.3
Projected 2020	13,933,622	8,720,952	5,212,670	1.6
Projected 2021	14,602,439	8,713,190	5,889,249	1.7
Projected 2022	15,266,704	9,031,365	6,235,339	1.7

Reviewer: Ashley Adams
Date: August 2, 2018

Loan Number: C18-001 (Increase)

# KENTUCKY INFRASTRUCTURE AUTHORITY GOVERNMENTAL AGENCIES LOAN FUND (FUND C) CITY OF BOWLING GREEN F/B/O BOWLING GREEN MUNICIPAL UTILITIES, WARREN COUNTY PROJECT REVIEW WX21227087

# I. PROJECT DESCRIPTION

The City of Bowling Green is requesting a Fund C loan increase in the amount of \$740,000 for the Water Treatment Plant Expansion project. This increase will bring the loan total to \$4,540,000. In order to meet anticipated growth and redundancy needs in the City and County, it is necessary to upgrade the aging water treatment plant. This loan will fund all engineering costs for the project which has anticipated construction costs of around \$42 million in bond financing. The future plant design will maintain the conventional treatment process and include the addition of a filter building with ten filters, two flash mix units, four flocculation and sedimentation basins, and expansion of an existing raw water pump station. The project will be offered for bids with a base bid addition of 7.5 MGD with an additive alternate of 7.5 MGD. The renovation will potentially add 7.5-15 MGD of capacity to the current plant capacity of 30 MGD (37.5-45 MGD total).

The driving force behind the expansion is mainly to address population growth in the County. Because BGMU is the majority water provider for Warren County Water District (WCWD), they must increase capacity to continue meeting their needs. As a result of this, WCWD will actually carry approximately 85% of the debt related to this project. BGMU provides WCWD with around 8.5 MG of water on a daily basis.

BGMU services approximately 22,000 residential and commercial retail customers. They also indirectly serve an additional 25,000 customers through water sales to Warren County Water District.

# II. PROJECT BUDGET

	 Total
Planning	\$ 138,026
Engineering Fees - Design	2,175,069
Engineering Fees - Construction	1,096,392
Engineering Fees - Inspection	1,080,000
Construction	42,000,000
Contingency	 50,513
Total	\$ 46,540,000

# III. PROJECT FUNDING

Total	\$ 46,540,000	100%	
Bonds	 42,000,000	90%	
Fund C Loan	\$ 4,540,000	10%	
	Amount	%	

# IV. KIA DEBT SERVICE

Amortized Loan Amount	\$ 4,540,000
Interest Rate	3.00%
Loan Term (Years)	 20
Estimated Annual Debt Service	\$ 303,518
Administrative Fee (0.20%)	9,080
<b>Total Estimated Annual Debt Service</b>	\$ 312,598
Full Project Debt Service Estimate	\$ 3,303,078

# V. PROJECT SCHEDULE

Bid Opening November 2018
Construction Start January 2019
Construction Stop January 2022

# VI. CUSTOMER COMPOSITION AND RATE STRUCTURE

# A) Customers

	Current
Residential	15,532
Commercial/Industrial	6,500
Total	22,032

# B) Rates

Water	Inside	City	Outside City		
_	Current	Prior	Current	Prior	
Date of Last Rate Increase	07/01/18	07/01/17	07/01/18	07/01/17	
Customer Charge	\$6.58	\$5.73	\$9.21	\$8.02	
First 2,000 cubic feet (per 100 cf)	2.99	2.90	4.18	4.05	
Next 23,000 cubic feet (per 100 cf)	2.78	2.69	3.89	3.77	
Next 25,000 cubic feet (per 100 cf)	2.39	2.32	3.34	3.24	
Cost for 4,000 gallons	\$22.57	\$21.24	\$31.56	\$29.68	
Increase %	6.3%		6.4%		
Affordability Index (Rate/MHI)	0.7%		1.0%		

Sewer	Inside	e City	Outside City		
	Current	Prior	Current	Prior	
Date of Last Rate Increase	07/01/18	07/01/17	07/01/18	07/01/17	
Customer Charge	\$6.22	\$5.42	\$8.71	\$7.59	
First 2,000 cubic feet (per 100 cf)	3.72	3.61	5.22	\$5.06	
Next 23,000 cubic feet (per 100 cf)	3.72	3.61	5.22	\$5.06	
Next 25,000 cubic feet (per 100 cf)	3.72	3.61	5.22	\$5.06	
Cost for 4,000 gallons	\$26.11	\$24.72	\$36.62	\$34.65	
Increase %	5.6%		5.7%		
Affordability Index (Rate/MHI)	0.8%		1.2%		

# VII. <u>DEMOGRAPHICS</u>

Based on current Census data from the American Community Survey 5-Year Estimate 2012-2016, the Utility's service area population was 46,601 with a Median Household Income (MHI) of \$37,709. The median household income for the Commonwealth is \$44,811.

	County Unemployment						
Year	City % Change		County	% Change	Date	Rate	
1980	40,450		71,828		June 2005	5.4%	
1990	40,641	0.5%	76,673	6.7%	June 2010	14.4%	
2000	49,296	21.3%	92,522	20.7%	June 2015	5.8%	
2010	58,067	17.8%	113,792	23.0%	June 2017	5.1%	
Current	57,323	-1.3%	111,843	-1.7%			
Cumulative %		41.7%		55.7%			

# VIII. FINANCIAL ANALYSIS

Financial information was obtained from the audited financial statements for the Bowling Green Municipal Utilities Water and Sewer Division for the years ended June 30, 2015 through 2017. The non-cash impact of GASB 68, Accounting and Financial Reporting for Pensions, has been removed from fiscal 2016 and 2017 operating expenses. Percentage references in the History section below are based on whole dollar amounts and not the rounded amounts presented.

Combined water and sewer revenues increased 10.4% from \$23.1 million in 2015 to \$25.5 million in 2017. Total revenue contributions are split almost evenly between water and sewer consistently each year and have both sustained 10%-11% growth during the audited period observed. Operating expenses increased 6% from \$14.4 million in 2015 to \$15.2 million in 2017. The debt coverage ratio was 1.6, 1.8, and 1.9 from 2015 to 2017, respectively.

The balance sheet reflects a current ratio of 1.6, a debt to equity ratio of 1.0, 37 days sales in accounts receivable, and 6 months operating expenses in unrestricted cash.

#### PROJECTED

Projections are based on the following assumptions:

- 1) Revenues will increase 1% for growth and reflect all approved rate increases through 2022.
- 2) Expenses will increase 2% for inflation.
- 3) Debt service for the estimated \$42 million bond issue for this project is anticipated to begin in late FY 2019 or 2020. A fair market interest rate assumption of 3.8% and a 20 year term was used to calculate debt service. Approximately 85% of this debt will end up being paid by Warren County Water District, however, the financials presentation reflects debt coverage for BGMU shouldering the entire burden.
- 4) Debt service coverage will be approximately 1.7 in 2022 when full year principal and interest payments are expected to begin.

Based on the proforma assumptions, the utility shows adequate cash flow to repay the KIA Fund C loan.

# REPLACEMENT RESERVE

Because of the nature of this loan (engineering fees only), KIA will not require a replacement reserve.

#### IX. DEBT OBLIGATIONS

	(	Outstanding	Maturity
Revenue Bonds 2011/2012	\$	8,680,000	2032
Revenue Bonds 2013		4,780,000	2024
KIA Loan (F00-01)		1,078,021	2023
KIA Loan (F02-08)		2,381,432	2028
KIA Loan (A06-08)		2,947,684	2029
KIA Loan (A08-03)		42,708,338	2033
KIA Loan (A209-21)		46,397	2031
KIA Loan (F11-16)		885,532	2033
KIA Loan (C14-001)		1,164,915	2037
KIA Loan B17-009 (\$1,156,803 Remaining)		843,197	TBD
Pension related debt to Electric Division		5,804	2037
Revenue Bonds (i/a/o \$42,000,000)		-	TBD
Total	\$	65,521,320	

# X. CONTACTS

**Legal Applicant** 

Entity Name City of Bowling Green
Authorized Official Bruce Wilkerson (Mayor)

County Warren

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**Applicant Contact** 

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Organization BGMU

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Bowling Green, KY 42102-7300

**Project Administrator** 

Name Brett Jones

Organization BGMU

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Phone 270-782-1200 Address 801 Center St

Bowling Green, KY 42102-7300

**Consulting Engineer** 

PE Name Mike Bernard

Firm Name Smith Seckman Reid, Inc

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Phone 615-460-0582 Address 2995 Sidco Drive

Nashville, TN 37204

# XI. <u>RECOMMENDATIONS</u>

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

# CITY OF BOWLING GREEN FINANCIAL SUMMARY (JUNE YEAR END)

FINANCIAL SUMMARY (JUNE YEAR END)								
	Audited	Audited	Audited	Projected	Projected	Projected	Projected	Projected
	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Balance Sheet								
Assets								
Current Assets	7,449,372	8,776,109	10,410,158	11,304,937	12,225,730	12,848,299	13,538,848	14,263,687
Other Assets	148,545,158	147,781,196	148,555,995	151,692,735	167,541,733	181,299,732	195,666,730	194,832,395
Total	155,994,530	156,557,305	158,966,153	162,997,672	179,767,463	194,148,031	209,205,578	209,096,082
Liabilities & Equity								
Current Liabilities	6,264,617	5,655,723	6,594,685	6,690,792	6,804,308	7,609,434	7,731,387	7,784,738
Long Term Liabilities	76,142,685	74,749,173	72,658,745	72,004,526	83,062,437	94,060,423	120,495,888	100,385,105
Total Liabilities	82,407,302	80,404,896	79,253,430	78,695,318	89,866,745	101,669,857	128,227,275	108,169,843
Net Assets	73,587,228	76,152,409	79,712,723	84,302,354	89,900,718	92,478,174	80,978,303	100,926,239
Cash Flow								
Revenues	23,115,107	23,837,230	25,525,040	27,388,961	29,016,160	30,000,777	30,989,066	31,979,192
Operating Expenses	14,378,120	14,137,691	15,219,418	15,520,464	15,819,530	16,132,738	16,452,210	16,778,071
Other Income	64,619	64,061	65,583	65,583	65,583	65,583	65,583	65,583
Cash Flow Before Debt Service	8,801,606	9,763,600	10,371,205	11,934,080	13,262,213	13,933,622	14,602,439	15,266,704
Debt Service								
Existing Debt Service	5,351,320	5,366,938	5,400,866	5,280,548	5,726,120	8,720,952	8,713,190	9,031,365
Proposed KIA Loan	0	0	0	0	0	0	0	312,598
Total Debt Service	5,351,320	5,366,938	5,400,866	5,280,548	5,726,120	8,720,952	8,713,190	9,343,963
Cash Flow After Debt Service	3,450,286	4,396,662	4,970,339	6,653,532	7,536,093	5,212,670	5,889,249	5,922,741
Police								
Ratios	4.0	4.0	4.0	4.7	4.0	4.7	4.0	4.0
Current Ratio	1.2 1.1	1.6 1.1	1.6	1.7	1.8	1.7	1.8	1.8
Debt to Equity	40.7	37.0	1.0 37.4	0.9 37.4	1.0 37.4	1.1 37.4	1.6 37.4	1.1 37.4
Days Sales in Accounts Receivable  Months Operating Expenses in Unrestricted Cash	3.8	5.1	5.9	6.3	6.8	7.0	7.3	37.4 7.8
Months Operating Expenses in Office tricted Cash								
Debt Coverage Ratio	1.6	1.8	1.9	2.3	2.3	1.6	1.7	1.7