

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

- **Fund A Loan**

<u>Loan #</u>	<u>Borrower</u>	<u>Loan Amount</u>	<u>County</u>
A19-032	City of Morehead	\$ 3,650,000	Rowan
A19-048	Lincoln County Sanitary District (P&D)	\$ 388,400	Lincoln

- **Fund F Loan**

<u>Loan #</u>	<u>Borrower</u>	<u>Loan Amount</u>	<u>County</u>
F19-002	City of Morehead	\$ 6,554,200	Rowan

EXECUTIVE SUMMARY		Reviewer	Ashley Adams		
KENTUCKY INFRASTRUCTURE AUTHORITY		Date	March 7, 2019		
FUND A, FEDERALLY ASSISTED WASTEWATER		KIA Loan Number	A19-032		
REVOLVING LOAN FUND		WRIS Number	SX21205037		
BORROWER	CITY OF MOREHEAD ROWAN COUNTY				
BRIEF DESCRIPTION					
This project will address capacity issues and sanitary sewer overflows (SSO) throughout sections of the US 60 West and KY 801 sections of Morehead Utility Plant Board's collection system. This will be accomplished by rehabilitating over 65,000 linear feet (LF) of line and 5 different lift stations. Some of the lift station rehabilitation will include increasing capacity as well as installing energy efficient VFD devices and SCADA. Approximately 62% of the recorded 396 SSO events that have occurred since 1998 in the collection system have occurred in the proposed project area.					
PROJECT FINANCING		PROJECT BUDGET			
KIA Fund A Loan	\$3,650,000	RD Fee %	Actual %		
				10,000	
				15,000	
		Eng - Design / Const	7.1%	6.5%	212,800
		Eng - Insp	3.9%	3.6%	118,600
		Eng - Other			20,600
		Construction			2,936,000
		Contingency			337,000
TOTAL	\$3,650,000	TOTAL			\$3,650,000
REPAYMENT	Rate	2.00%	Est. Annual Payment \$229,626		
	Term	20 Years	1st Payment	6 Mo. after first draw	
PROFESSIONAL SERVICES	Engineer	Bluegrass Engineering, PLLC			
	Bond Counsel	Dinsmore & Shohl, LLP			
PROJECT SCHEDULE	Bid Opening	Oct-19			
	Construction Start	Jan-20			
	Construction Stop	Oct-20			
DEBT PER CUSTOMER	Existing	\$2,352			
	Proposed	\$5,738			
OTHER DEBT	See Attached				
OTHER STATE-FUNDED PROJECTS LAST 5 YRS	See Attached				
RESIDENTIAL RATES		<u>Users</u>	<u>Avg. Bill</u>		
	Current	5,581	\$29.76 (for 4,000 gallons)		
	Additional	0	\$29.76 (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	2,382,274	1,171,067	1,211,207	2.0	
Audited 2017	2,306,343	1,170,694	1,135,649	2.0	
Audited 2018	2,685,132	1,176,634	1,508,498	2.3	
Projected 2019	3,984,006	1,300,087	2,683,919	3.1	
Projected 2020	3,746,848	1,284,214	2,462,634	2.9	
Projected 2021	3,504,947	1,397,964	2,106,983	2.5	
Projected 2022	3,200,308	2,260,825	939,483	1.4	
Projected 2023	2,948,635	2,096,061	852,574	1.4	

Reviewer: Ashley Adams
Date: March 7, 2019
Loan Number: A19-032

**KENTUCKY INFRASTRUCTURE AUTHORITY
WASTEWATER REVOLVING LOAN FUND (FUND A)
CITY OF MOREHEAD, ROWAN COUNTY
PROJECT REVIEW
SX21205037**

I. PROJECT DESCRIPTION

The Morehead Plant Utility Board is requesting a Fund A loan in the amount of \$3,650,000 for the US 60 West and KY 801 SSO Correction project. This project will improve the sanitary sewer collection system in order to address capacity issues and sanitary system overflows (SSO). MUPB began recording SSO events circa 1998. In 2000, MUPB was released from their Agreed Order with the Kentucky Division of Water. Since 1998, MUPB has recorded 396 SSO events throughout their collection system; 245 of the recorded 396 SSO events, approximately 62%, have occurred in the proposed capital improvement project area. Currently, the majority of the SSO events occur at the lift station wet wells in the proposed project area. However, the manholes found in lower elevation areas, such as Salt Lick, often overflow when the pump stations become backed up. Increasing the line capacity will alleviate the bottleneck and allow the lift stations to pump at their designed capacity, thus reducing SSO events. Approximately 65,500 linear feet of line will be rehabilitated as well as 5 lift stations and related appurtenances. Two of the lift stations will be equipped with SCADA and three will be equipped with VFD devices to increase energy efficiency.

The Morehead Utility Plant Board currently serves 5,581 sewer customers, 3,453 water customers, and also provides natural gas to customers in Rowan County.

II. PROJECT BUDGET

	<u>Total</u>
Legal Expenses	10,000
Planning	15,000
Engineering Fees - Design	149,000
Engineering Fees - Construction	63,800
Engineering Fees - Inspection	118,600
Engineering Fees - Other	20,600
Construction	2,936,000
Contingency	337,000
Total	\$ 3,650,000

III. PROJECT FUNDING

	<u>Amount</u>	<u>%</u>
KIA Fund A Loan	\$ 3,650,000	100%
Total	\$ 3,650,000	100%

IV. KIA DEBT SERVICE

Construction Loan	\$ 3,650,000
Less: Principal Forgiveness	<u>0</u>
Amortized Loan Amount	\$ 3,650,000
Interest Rate	2.00%
Loan Term (Years)	<u>20</u>
Estimated Annual Debt Service	\$ 222,326
Administrative Fee (0.20%)	<u>7,300</u>
Total Estimated Annual Debt Service	\$ 229,626

V. PROJECT SCHEDULE

Bid Opening	October 1, 2019
Construction Start	January 2, 2020
Construction Stop	October 1, 2020

VI. CUSTOMER COMPOSITION AND RATE STRUCTURE

A) Customers

	<u>Current</u>
Residential	4,783
Commercial	792
Industrial	<u>6</u>
Total	5,581

B) Rates

Water	Inside City		Outside City	
	Current	Prior	Current	Prior
Date of Last Rate Increase	08/01/18	08/01/17	08/01/18	08/01/17
Minimum (First 2,000 gallons)	\$17.40	\$14.95	\$20.88	\$17.94
Next 4,000 Gallons (per 1,000)	7.03	6.04	8.43	7.24
Cost for 4,000 gallons	<u>\$31.46</u>	<u>\$27.03</u>	<u>\$37.74</u>	<u>\$32.42</u>
Increase %	16.4%		16.4%	
Affordability Index (Rate/MHI)	1.0%		1.2%	

Sewer	Inside City		Outside City	
	Current	Prior	Current	Prior
Date of Last Rate Increase	08/01/18	08/01/17	08/01/18	08/01/17
Minimum (First 2,000 gallons)	\$14.60	\$10.50	\$17.53	\$12.61
Next 4,000 Gallons (per 1,000)	7.58	5.45	8.78	6.32
Cost for 4,000 gallons	\$29.76	\$21.40	\$35.09	\$25.25
Increase %	39.1%		39.0%	
Affordability Index (Rate/MHI)	0.9%		1.1%	

Water rates will be evaluated and adjusted on an annual basis for the next few years based on pending capital projects in the system. The Utility is exploring the implementation of a CPI clause in the future to keep up with inflation.

VII. DEMOGRAPHICS

Based on current Census data from the American Community Survey 5-Year Estimate 2012-2016, the Utility's service area population was 15,128 with a Median Household Income (MHI) of \$38,498. The median household income for the Commonwealth is \$44,811. The project will qualify for the non-standard interest rate of 2% because the MHI of the system is between 80-100% of Kentucky's MHI.

Year	City	Population		County Unemployment		
		% Change	County	% Change	Date	Rate
1980	7,789		19,049		June 2005	6.6%
1990	8,357	7.3%	20,353	6.8%	June 2010	10.4%
2000	5,914	-29.2%	22,094	8.6%	June 2015	6.6%
2010	6,845	15.7%	23,333	5.6%	June 2018	6.3%
Current	7,615	11.2%	24,302	4.2%		
Cumulative %		-2.2%		27.6%		

VIII. 2018 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, 2016 through June 30, 2018. Morehead Plant Utility Board is comprised of water, sewer, and gas operations and has limited segregation in their financial statements. 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

Total revenues including water, sewer, and gas have increased 20% from 2016 to 2018 mostly due to rate increases. Water revenues increased 15% during that period, sewer revenues increased 18%, and gas revenues increased 33%. Historically, water has contributed the majority of cash available for debt service to the operation while also making up for deficits in sewer. Rate increases in the beginning of fiscal year (FY) 2019 will bring water and sewer almost equal in terms of cash flow available for debt service and other capital improvements. Total operating expenses increased 20% from 2016 to 2018. Water, sewer, and gas share administrative expenses which saw a 20% increase during this time period while water saw a 6% increase, sewer an 11% increase, and gas a 42% increase in operating expenses.

The 2018 balance sheet reflects a current ratio of 1.9, a debt to equity ratio of 0.4, 51.8 days sales in accounts receivable, and 1.6 months operating expenses in unrestricted cash. The debt coverage ratio from 2016 to 2018 was 2.0, 2.0, and 2.3, respectively.

PROJECTIONS

Projections are based on the following assumptions:

- 1) Water revenues for both residential and wholesale customers will increase approximately 16% in FY 2019 as a result of a rate increase. Water revenues will continue to increase in the five year forecast according to planned rate increases by the Utility based on their capital improvements plan and updated annually with KIA. Residential water rates are anticipated to increase an average of 16% from FY 2019-2021 while wholesale rates will be adjusted based on the wholesale customer's responsibility for debt service coverage for plant expansion projects. Only the currently known 2019 increase is factored into this analysis.
- 2) Sewer revenues will increase approximately 39% due to a rate increase in FY 2019 and remain flat thereafter.
- 3) Expenses will increase 2% annually for inflation.
- 4) Debt coverage is 1.4 in 2022 when full principal and interest payments for loan A19-032 and the first four increments of pending KIA loan F19-002 go into repayment.

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% (\$182,000 total) of the final amount borrowed (prior to principal forgiveness, if any) to be funded annually (\$9,100 yearly) each December 1 for 20 years and maintained for the life of the loan.

X. DEBT OBLIGATIONS

	<u>Outstanding</u>	<u>Maturity</u>
Bond Series 1966	\$ 15,000	2019
RD Series 2001A	3,427,000	2042
RD Series 2004	1,258,000	2044
KIA Loan (F00-05)	1,414,667	2023
KIA Loan (A04-02)	3,048,765	2026
KIA Loan (A10-16)	1,462,043	2033
KIA Loan (A209-36)	248,751	2031
KIA Loan (A209-37)	431,449	2032
KIA Loan (A16-065 i/a/o \$1,800,000)	1,482,651	2038
KIA Loan (F18-004 P&D i/a/o \$1,297,200)	0	TBD
KIA Loan (F19-002 i/a/o \$26,428,000)	0	TBD
Total	\$ 12,788,326	

XI. CONTACTS

Legal Applicant	
Entity Name	City of Morehead
Authorized Official	Laura White-Brown (Mayor)
County	Rowan
Email	mayor.whitebrown@morehead-ky.gov
Phone	606-784-8505
Address	314 Bridge Street Morehead, KY 40351

Applicant Contact

Name Holly McGrath- Rosas
Organization Morehead Utility Plant Board
Email hrosas@mupb.com
Phone 606-784-8313
Address 135 S Wilson Ave
Morehead, KY 40351

Project Administrator

Name Jocelyn R. Gross
Organization Gateway ADD
Email jocelynr.gross@ky.gov
Phone 606-780-0090
Address 110 Lake Park Dr.
Morehead, KY 40351

Consulting Engineer

PE Name Matthew Ray Curtis
Firm Name Bluegrass Engineering, PLLC
Email mcurtis@bludgrassengineering.net
Phone 502-370-6551
Address 222 East Main St, Suite 1
Georgetown, KY 40324

XII. RECOMMENDATIONS

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

**CITY OF MOREHEAD
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>	<u>Projected 2024</u>
Balance Sheet									
Assets									
Current Assets	2,293,408	3,010,960	2,910,114	3,479,774	3,726,037	3,936,736	4,030,684	4,115,941	4,376,717
Other Assets	41,790,087	40,104,332	42,181,210	45,382,497	51,805,677	57,488,985	60,509,254	59,066,577	52,909,209
Total	<u>44,083,495</u>	<u>43,115,292</u>	<u>45,091,324</u>	<u>48,862,271</u>	<u>55,531,714</u>	<u>61,425,721</u>	<u>64,539,938</u>	<u>63,182,518</u>	<u>57,285,926</u>
Liabilities & Equity									
Current Liabilities	1,408,302	1,393,732	1,819,172	1,829,761	1,855,229	1,880,554	1,743,395	1,601,149	860,569
Long Term Liabilities	15,194,771	16,084,456	18,298,424	18,298,108	25,231,198	31,314,313	37,019,337	38,580,857	38,580,857
Total Liabilities	<u>16,603,073</u>	<u>17,478,188</u>	<u>20,117,596</u>	<u>20,127,869</u>	<u>27,086,427</u>	<u>33,194,867</u>	<u>38,762,732</u>	<u>40,182,006</u>	<u>39,441,426</u>
Net Assets	<u>27,480,422</u>	<u>25,637,104</u>	<u>24,973,728</u>	<u>28,734,402</u>	<u>28,445,287</u>	<u>28,230,854</u>	<u>25,777,206</u>	<u>23,000,512</u>	<u>17,844,500</u>
Cash Flow									
Revenues	9,403,121	9,990,829	11,271,041	13,394,448	13,394,448	13,394,448	13,394,448	13,394,448	13,394,448
Operating Expenses	7,150,384	7,657,223	8,591,321	9,415,854	9,653,012	9,894,913	10,199,552	10,451,225	10,617,480
Other Income	129,537	(27,263)	5,412	5,412	5,412	5,412	5,412	5,412	5,412
Cash Flow Before Debt Service	<u>2,382,274</u>	<u>2,306,343</u>	<u>2,685,132</u>	<u>3,984,006</u>	<u>3,746,848</u>	<u>3,504,947</u>	<u>3,200,308</u>	<u>2,948,635</u>	<u>2,782,380</u>
Debt Service									
Existing Debt Service*	1,171,067	1,170,694	1,176,634	1,300,087	1,284,214	1,397,964	1,511,037	1,346,273	1,180,933
Proposed KIA Loan (Phase 1)	0	0	0	0	0	0	251,926	251,926	251,926
Proposed KIA Loan (Phase 2)	0	0	0	0	0	0	497,862	497,862	497,862
Proposed KIA Loan (Phase 3)	0	0	0	0	0	0	0	0	342,909
Total Debt Service	<u>1,171,067</u>	<u>1,170,694</u>	<u>1,176,634</u>	<u>1,300,087</u>	<u>1,284,214</u>	<u>1,397,964</u>	<u>2,260,825</u>	<u>2,096,061</u>	<u>2,273,630</u>
Cash Flow After Debt Service	<u>1,211,207</u>	<u>1,135,649</u>	<u>1,508,498</u>	<u>2,683,919</u>	<u>2,462,634</u>	<u>2,106,983</u>	<u>939,483</u>	<u>852,574</u>	<u>508,750</u>
Ratios									
Current Ratio	1.6	2.2	1.6	1.9	2.0	2.1	2.3	2.6	5.1
Debt to Equity	0.6	0.7	0.8	0.7	1.0	1.2	1.5	1.7	2.2
Days Sales in Accounts Receivable	45.7	51.0	51.8	51.8	51.8	51.8	51.8	51.8	51.8
Months Operating Expenses in Unrestricted Cash	1.6	3.3	1.6	2.3	2.8	3.3	3.5	3.6	4.7
Debt Coverage Ratio	2.0	2.0	2.3	3.1	2.9	2.5	1.4	1.4	1.2

* Existing debt service includes pending loan A19-032 starting in 2022

EXECUTIVE SUMMARY		Reviewer	Ashley Adams	
KENTUCKY INFRASTRUCTURE AUTHORITY		Date	February 7, 2019	
FUND A, FEDERALLY ASSISTED WASTEWATER		KIA Loan Number	A19-048	
REVOLVING LOAN FUND		WRIS Number	SX21137023	
BORROWER		LINCOLN COUNTY SANITATION DISTRICT LINCOLN COUNTY		
BRIEF DESCRIPTION				
This loan will be for the planning and design of the second phase of a project bringing sanitary sewer service to the central Moreland area and an area south of KY Hwy 1194 in Lincoln County. The project area has seen rapid residential development and will serve almost all subdivisions (both old and new) on the east side of US 127 from Hustonville by bringing sewer service to approximately 355 households and 8 commercial customers.				
PROJECT FINANCING		PROJECT BUDGET		
Fund A Planning & Design Loan	\$388,400	RD Fee %	Actual %	
		Legal Expenses		45,000
		Land, Easements		75,000
		Planning		20,000
		Eng - Design		248,400
TOTAL	\$388,400	TOTAL		\$388,400
REPAYMENT	Rate	3.00%	Est. Annual Payment	\$85,008
	Term	5 Years	1st Payment	6 Mo. after first draw
PROFESSIONAL SERVICES	Engineer	AGE Engineering Services		
	Bond Counsel	Dinsmore & Shohl, LLP		
PROJECT SCHEDULE	Bid Opening	Oct-19		
	Construction Start	Jan-20		
	Construction Stop	Dec-20		
DEBT PER CUSTOMER	Existing	\$1,372		
	Proposed	\$5,271		
OTHER DEBT	See Attached			
OTHER STATE-FUNDED PROJECTS LAST 5 YRS	See Attached			
RESIDENTIAL RATES		<u>Users</u>	<u>Avg. Bill</u>	
	Current	585	\$51.00	(for 4,000 gallons)
	Additional	363	\$51.00	(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 2015	41,927	0	41,927	n/a
Audited 2016	(3,314)	0	(3,314)	n/a
Audited 2017	(17,559)	0	(17,559)	n/a
Projected 2018	67,614	61,347	6,268	1.1
Projected 2019	153,678	123,206	30,472	1.2
Projected 2020	152,187	123,088	29,099	1.2
Projected 2021	150,666	123,478	27,188	1.2
Projected 2022	295,647	208,365	87,281	1.4

Reviewer: Ashley Adams
Date: March 7, 2019
Loan Number: A19-048

**KENTUCKY INFRASTRUCTURE AUTHORITY
WASTEWATER REVOLVING LOAN FUND (FUND A)
LINCOLN COUNTY SANITATION DISTRICT, LINCOLN COUNTY
PROJECT REVIEW
SX21137023**

I. PROJECT DESCRIPTION

The Lincoln County Sanitation District is requesting a Fund A Planning and Design loan in the amount of \$388,400 for the US 127 Corridor Sanitary Sewer Phase 2 project. This project will fund the planning and design of a project that will bring sanitary sewer to approximately 355 homes and 8 commercial customers that are currently on private septic systems nearing the end of their useful life. The area has seen rapid residential growth over the recent past and is currently underserved. This second phase will complete service to virtually all subdivisions on the east and west side of US 127 from the Norfolk Southern Railroad North to KY Hwy 1194.

The District has received national recognition from US EPA for their accomplishments with Phase 1 of this project including an Honorable Mention for the 2018 PISCES award. The first phase brought service to over 600 households and commercial customers in Lincoln County. The District is still in process of bringing all of those customers online and should have that completed somewhere near the end of 2019 per their estimated timeline. Connection delays have been experienced due to a shortage of plumbers able to perform the work and poor weather conditions, but the District will continue to push forward.

The District was established on May 10, 2011 by the Lincoln County Fiscal Court. It is governed by five directors who are appointed by the County Judge Executive and approved by the fiscal court. Connection to the public wastewater system is mandatory within four months of the date that a property owner is notified that service is available.

II. PROJECT BUDGET

	Total
Legal Expenses	\$ 45,000
Land, Easements	75,000
Planning	20,000
Engineering Fees - Design	248,400
Total	\$ 388,400

III. PROJECT FUNDING

	<u>Amount</u>	<u>%</u>
Fund A Planning & Design Loan	\$ 388,400	100%
Total	\$ 388,400	100%

IV. KIA DEBT SERVICE

Planning & Design Loan	\$ 388,400
Interest Rate	3.00%
Loan Term (Years)	5
Estimated Annual Debt Service	\$ 84,232
Administrative Fee (0.20%)	777
Total Estimated Annual Debt Service	\$ 85,008

V. PROJECT SCHEDULE

Bid Opening	November 2019
Construction Start	January 2020
Construction Stop	December 2020

VI. CUSTOMER COMPOSITION AND RATE STRUCTURE

A) Customers

	<u>Current</u>	<u>Proposed</u>	<u>Total</u>
Residential	535	355	890
Commercial	50	8	58
Industrial			
Total	585	363	948

B) Rates

	<u>Current</u>
Date of Last Rate Increase	06/14/14
Minimum	\$25.00
Per 1,000 Gallons	6.50
Cost for 4,000 gallons	\$51.00
Affordability Index (Rate/MHI)	1.5%

The District has a CPI clause which states they shall raise rates each year for inflation.

VII. DEMOGRAPHICS

Based on current Census data from the American Community Survey 5-Year Estimate 2012-2016, the Utility's service area population was 1,726 with a Median Household Income (MHI) of \$40,887. The median household income for the Commonwealth is \$44,811. The current interest rate for Planning and Design loans is 3%; however, the District conducted an income survey to better represent the actual income of the project area in anticipation of pursuing future construction funding with KIA and has qualified as a Disadvantaged Community for future construction funding at this time.

County Population			County Unemployment	
Year	County	% Change	Date	Rate
1980	19,053		June 2005	6.6%
1990	20,045	5.2%	June 2010	12.3%
2000	23,361	16.5%	June 2015	6.6%
2010	24,742	5.9%	June 2018	5.5%
Current	24,424	-1.3%		
Cumulative %		28.2%		

VIII. 2018 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, 2015 through June 30, 2017. During this time period the District was not fully operational, only managing the construction of the collection system. Phase 1 of the project was funded by a Fund A loan (A13-030) from KIA, an RD loan/grant, CDBG, ARC, and local funds (Lincoln County Fiscal Court, City of Houstonville, Lincoln County Industrial Authority). Loans totaled \$4,715,793 with \$3,208,500 in grant and local source funding for a project total of \$7,924,293.

During FY 2018 the District started collecting revenues from customers and inspection fees. As of January 2019, the District has 378 customers fully online with the rest of the Phase 1 project area estimated to be connected by the end of 2019. All eligible connections are being billed regardless of connection status based on provisions in the District's ordinance at this time. Based on financial data obtained from the District, average annual revenues for Phase 1 will total around \$308,000. Treatment expenses to the City of Danville will be around \$50,000 annually in addition to another \$84,000 in additional operating expenses. The District made their first debt service payment in

FY 2018 to KIA.

PROJECTIONS

Projections are based on the following assumptions:

- 1) Revenues will remain flat for growth and volume for Phase 1 and average \$308,000 annually.
- 2) Treatment costs will remain flat per the current contract with Danville at around \$60,000 annually while other operating expenses will increase 2% annually for inflation.
- 3) Phase 2 will be completed in approximately 2022 with anticipated construction costs being \$4,956,500. Debt service for the full construction project will begin the same year.
 - o The District will pursue at least \$1.5 million in grant funding for the project.
 - o Construction project assumptions are based on debt service being approximately \$130,000 per year with grant funding (CDBG, ARC) and no principal forgiveness associated with the loan. Debt service will increase approximately \$54,000 with no grant funding.
 - o At this time, it is estimated that revenues will need to increase approximately \$60,000 above Phase 2 expected revenues to support inflation, additional operating expense, and debt service if no grant funding is secured.
- 4) Debt service coverage is 1.4 in 2022 when principal and interest repayments begin. If, for any reason, Phase 2 construction does not occur and anticipated Phase 2 revenues are not added, The District will need to increase revenues approximately \$80,000 annually to repay the P&D loan.

Based on the pro forma assumptions, the utility shows adequate cash flow to repay the KIA Fund A loan when Phase 2 has become operational.

REPLACEMENT RESERVE

There are no replacement reserve requirements for this loan because it is only funding Planning and Design.

X. DEBT OBLIGATIONS

	<u>Outstanding Maturity</u>	
USDA Revenue Bond Series 2016	\$	350,000 2056
KIA Loan (A13-020)		4,365,793 2047
Total	\$	4,715,793

XI. CONTACTS

Legal Applicant

Entity Name	Lincoln County Sanitation District
Authorized Official	Bill Payne (Chairman)
County	Lincoln
Email	brpayne77@att.net
Phone	859-583-9626
Address	102 E Main St Stanford, KY 40484

Applicant Contact

Name	Bill Payne
Organization	Lincoln County Sanitation District
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Phone	859-854-6169
Address	102 E Main St Stanford, KY 40484

Project Administrator

Name	Karyn Leverenz
Organization	Bluegrass ADD
Email	kleverenz@bgadd.org
Phone	859-269-8021
Address	699 Perimeter Dr. Lexington, KY 40517

Consulting Engineer

PE Name	Luther Galloway
Firm Name	AGE Engineering Services
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Phone	606-365-8362
Address	165 Foster Lane Stanford, KY 40484

XII. RECOMMENDATIONS

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

**LINCOLN COUNTY SANITATION DISTRICT
FINANCIAL SUMMARY (JUNE YEAR END)**

	<u>Audited</u> <u>2015</u>	<u>Audited</u> <u>2016</u>	<u>Audited</u> <u>2017</u>	<u>Projected</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>
Balance Sheet								
Assets								
Current Assets	18,607	443,924	477,669	81,553	87,647	93,467	106,896	150,835
Other Assets	0	2,946,576	7,672,096	7,799,013	7,872,412	7,912,128	10,040,165	17,048,864
Total	18,607	3,390,500	8,149,765	7,880,566	7,960,060	8,005,595	10,147,061	17,199,700
Liabilities & Equity								
Current Liabilities	40,000	807,586	624,418	50,170	120,336	121,500	123,176	124,354
Long Term Liabilities	0	735,373	3,290,793	3,265,623	3,364,487	3,462,687	4,899,561	6,335,757
Total Liabilities	40,000	1,542,959	3,915,211	3,315,793	3,484,823	3,584,187	5,022,737	6,460,111
Net Assets	(21,393)	1,847,541	4,234,554	4,564,773	4,475,236	4,421,408	5,124,323	10,739,588
Cash Flow								
Revenues	0	0	0	80,638	308,160	308,160	308,160	508,100
Operating Expenses	3,073	3,314	17,559	73,762	154,482	155,973	157,494	212,454
Other Income	45,000	0	0	60,738	0	0	0	0
Cash Flow Before Debt Service	41,927	(3,314)	(17,559)	67,614	153,678	152,187	150,666	295,647
Debt Service								
Existing Debt Service	0	0	0	61,347	123,206	123,088	123,478	123,357
Proposed KIA Loan	0	0	0	0	0	0	0	85,008
Total Debt Service	0	0	0	61,347	123,206	123,088	123,478	208,365
Cash Flow After Debt Service	41,927	(3,314)	(17,559)	6,268	30,472	29,099	27,188	87,281
Ratios								
Current Ratio	0.5	0.5	0.8	1.6	0.7	0.8	0.9	1.2
Debt to Equity	1.0	0.8	0.9	0.7	0.8	0.8	1.0	0.6
Days Sales in Accounts Receivable	N/A	N/A	N/A	N/A	40.0	40.0	49.5	49.0
Months Operating Expenses in Unrestricted Cash	N/A	N/A	N/A	N/A	4.8	5.3	5.7	5.2
Debt Coverage Ratio	N/A	N/A	N/A	1.1	1.2	1.2	1.2	1.4

EXECUTIVE SUMMARY KENTUCKY INFRASTRUCTURE AUTHORITY FUND F, FEDERALLY ASSISTED DRINKING WATER REVOLVING LOAN FUND		Reviewer Date KIA Loan Number WRIS Number	Ashley Adams March 7, 2019 F19-002 WX21205048
BORROWER		CITY OF MOREHEAD ROWAN COUNTY	
BRIEF DESCRIPTION			
This will be the first construction funding increment in a multi-phased funded loan for a major water treatment plant expansion project for the Morehead Utility Plant Board. KIA previously funded the planning and design of the project in FY 2018 with loan F18-004 which will be rolled into the first construction increment. The first phase of the project will include a new raw water intake and raw water transmission line. The second phase of the project will span three funding cycles and will include the construction of a new water treatment plant. The third and final phase will begin in the fifth year and will construct a new ground storage tank and finished raw water line.			
PROJECT FINANCING		PROJECT BUDGET	RD Fee % Actual %
KIA Fund F Loan 2019	\$5,257,000	Administrative Expenses	\$20,000
KIA P&D Loan (F18-004)	1,297,200	Legal Expenses	10,000
ARC (2020)	500,000	Land, Easements	10,000
CDBG (2021)	1,000,000	Planning	165,450
ARC (2023)	500,000	Eng - Design / Const	6.4% 5.5% 1,433,550
KIA Fund F (2020-2023)	19,873,800	Eng - Insp	4.0% 3.1% 789,000
		Eng - Other	165,450
		Construction	24,800,000
		Contingency	1,034,550
TOTAL	\$28,428,000	TOTAL	\$28,428,000
REPAYMENT	Rate Term	0.50% 30 Years	Est. Annual Payment 1st Payment 6 Mo. after first draw \$251,926
PROFESSIONAL SERVICES	Engineer Bond Counsel	Eclipse Engineers, PLLC Dinsmore & Shohl, LLP	
PROJECT SCHEDULE		<u>Phase 1</u>	<u>Phase 2</u> <u>Phase 3</u>
	Bid Opening	Jun-19	Feb-20 Feb-22
	Construction Start	Aug-19	Apr-20 Apr-22
	Construction Stop	Aug-20	Jun-22 Apr-23
DEBT PER CUSTOMER	Existing Proposed	\$3,801 \$9,275	
OTHER DEBT	See Attached		
OTHER STATE-FUNDED PROJECTS LAST 5 YRS	See Attached		
RESIDENTIAL RATES		<u>Users</u>	<u>Avg. Bill</u>
	Current	3,453	\$31.46 (for 4,000 gallons)
	Additional	0	\$31.46 (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	2,382,274	1,171,067	1,211,207 2.0
Audited 2017	2,306,343	1,170,694	1,135,649 2.0
Audited 2018	2,685,132	1,176,634	1,508,498 2.3
Projected 2019	3,984,006	1,300,087	2,683,919 3.1
Projected 2020	3,746,848	1,284,214	2,462,634 2.9
Projected 2021	3,504,947	1,397,964	2,106,983 2.5
Projected 2022	3,200,308	2,260,825	939,483 1.4
Projected 2023	2,948,635	2,096,061	852,574 1.4

Reviewer: Ashley Adams
Date: March 7, 2019
Loan Number: F19-002

**KENTUCKY INFRASTRUCTURE AUTHORITY
DRINKING WATER STATE REVOLVING FUND (FUND F)
CITY OF MOREHEAD, ROWAN COUNTY
PROJECT REVIEW
WX21205048**

I. PROJECT DESCRIPTION

The Morehead Utility Plant Board is requesting the first increment of a Multi-Phased Fund F loan in the amount of \$5,257,000 for the Regional Water Treatment Plant Construction project. Prior KIA Loan F18-004 (\$1,297,200) which funded the planning and design of this project will be rolled into this increment of the loan for a total of \$6,554,200. KIA plans to fund this major project in annual increments from the 2019 funding cycle through 2023. Each year the Utility will undergo a financial analysis and reapply to KIA for authorization of supplemental funding. Project progress and finances will be reviewed with each supplemental application.

Phase One will be completed in the first year (2019) and will include a new raw water intake and raw water transmission line. Phase Two will begin in the second year and be completed in the fourth year (2020-2022); the second phase will include the construction of the new water treatment plant. The final phase of the project will begin in the fourth year and be completed in the fifth year (2023) and will include the construction of a new ground storage tank and a finished water line.

The new raw water intake will replace the existing intake structure located approximately three miles below the Cave Run Lake Dam on the Licking River. It will be a fixed structure on Cave Run Lake and will include variable intake depths. The new Cave Run Lake raw water intake structure will include a new 1,000 kW standby diesel generator. The intake structure will feature security fencing to encompass the site. Approximately 6,500 LF of 24" DI pipe will be installed to connect the intake structure to the water treatment plant. The relocation of the intake is expected to significantly improve raw water quality with a much better turbidity.

The new 12 million gallons per day (MGD) regional water treatment plant (WTP) will replace the existing 8 MGD WTP. The proposed 12 MGD regional WTP will feature new and improved technologies that have been introduced to the treatment process since the last major expansion of the existing plant in 2002. The plant will employ pre-treatment flocculation using flash mix and a flocculation basin, a membrane pressure filtration system, and a granular activated carbon (GAC) adsorption system for treatment. The new WTP will include all new treatment and administration facilities on a site near the existing WTP, upgraded SCADA/telemetry for the WTP and distribution system sites along with an increased clearwell capacity of 1,800,000 gallons (currently 1,237,000 gallons). Three 1 MG earthen lagoons will be constructed (for a total capacity of 3 MG) for residual sludge containment of the washwater generated from

membrane backwashes, flux maintenance, enhanced flux maintenance, and clean-in-place operations. The site will be secured through the construction of security fencing to surround the facility.

Approximately 4,500 LF of finished waterline will be extended to a new million gallon ground storage tank. The existing US 60 tank will be decommissioned (621,000 gallons) and the new tank will serve as its replacement. The project will increase the net storage volume of the utility by 379,000 gallons once the increased clearwell capacity is obtained and the US 60 tank is decommissioned. Given the demand for potable water in the area, no issues are anticipated with respect to mixing or turnover for the new tank. To reduce the risk of disinfection by-product (DBP) formation, this issue will be taken into consideration during the design phase and site identification of the storage tank.

The Morehead Utility Plant Board currently serves 5,581 sewer customers, 3,453 water customers, and also provides natural gas to customers in Rowan County. In addition, they sell approximately 434 MG of water to the Bath County Water District and approximately 620 MG to Rowan Water, Inc. annually. Both of these systems will contribute to debt service for this project through wholesale rate increases which will be passed on to customers of those systems. Both Bath County Water District and Rowan Water are PSC regulated.

II. PROJECT BUDGET

	2019 KIA Increment + P&D Loan	Estimated Project Total
Administrative Expenses	\$ 20,000	\$ 20,000
Legal Expenses	10,000	10,000
Land, Easements	10,000	10,000
Planning	165,450	165,450
Engineering Fees - Design	1,131,750	1,131,750
Engineering Fees - Construction	55,200	301,800
Engineering Fees - Inspection	148,000	789,000
Engineering Fees - Other	13,800	165,450
Construction	4,800,000	24,800,000
Contingency	200,000	1,034,550
Total	\$ 6,554,200	\$ 28,428,000

III. PROJECT FUNDING

	<u>Amount</u>	<u>%</u>
KIA Fund F Loan 2019	\$ 5,257,000	18%
KIA P&D Loan (F18-004)	1,297,200	5%
ARC (2020)	500,000	2%
CDBG (2021)	1,000,000	4%
ARC (2023)	500,000	2%
KIA Fund F (2020-2023)	19,873,800	70%
Total	\$ 28,428,000	100%

IV. KIA DEBT SERVICE

		Total Project*
Construction Loan (P1 + P&D Loan)	\$ 6,554,200	\$ 28,428,000
Less: Principal Forgiveness	0	0
Amortized Loan Amount	\$ 6,554,200	\$ 28,428,000
Interest Rate	0.50%	0.50%
Loan Term (Years)	30	30
Estimated Annual Debt Service	\$ 235,541	\$ 1,021,628
Administrative Fee (0.25%)	16,386	71,070
Total Estimated Annual Debt Service	\$ 251,926	\$ 1,092,698

*Estimated total debt service if no grant funding is received.

V. PROJECT SCHEDULE

	Phase 1	Phase 2	Phase 3
Bid Opening	June 2019	February 2020	February 2022
Construction Start	August 2019	April 2020	April 2022
Construction Stop	August 2020	June 2022	April 2023

VI. CUSTOMER COMPOSITION AND RATE STRUCTURE

A) Customers

	<u>Current</u>
Residential	2,824
Commercial	623
Industrial	6
Total	3,453

B) Rates

Water	Inside City		Outside City	
	Current	Prior	Current	Prior
Date of Last Rate Increase	08/01/18	08/01/17	08/01/18	08/01/17
Minimum (First 2,000 gallons)	\$17.40	\$14.95	\$20.88	\$17.94
Next 4,000 Gallons (per 1,000)	7.03	6.04	8.43	7.24
Cost for 4,000 gallons	\$31.46	\$27.03	\$37.74	\$32.42
Increase %	16.4%		16.4%	
Affordability Index (Rate/MHI)	1.0%		1.2%	

Water rates will be evaluated and adjusted on an annual basis for the next few years based on pending capital projects in the system. The Utility is exploring the implementation of a CPI clause in the future to keep up with inflation.

Sewer	Inside City		Outside City	
	Current	Prior	Current	Prior
Date of Last Rate Increase	08/01/18	08/01/17	08/01/18	08/01/17
Minimum (First 2,000 gallons)	\$14.60	\$10.50	\$17.53	\$12.61
Next 4,000 Gallons (per 1,000)	7.58	5.45	8.78	6.32
Cost for 4,000 gallons	\$29.76	\$21.40	\$35.09	\$25.25
Increase %	39.1%		39.0%	
Affordability Index (Rate/MHI)	0.9%		1.1%	

VII. DEMOGRAPHICS

Based on current Census data from the American Community Survey (ACS) 5-Year Estimate 2012-2016, the Utility’s service area population was 34,827 with a Median Household Income (MHI) of \$36,586 according to WRIS. The median household income for the Commonwealth is \$44,811. Morehead’s water system has historically qualified for KIA’s Disadvantaged Community status and subsequent loan terms, however, as ACS data estimates have become more skewed in recent years, the Utility elected to conduct a Modified Weighted Proximity Analysis (MWPA) to better identify the community’s MHI. The MWPA demonstrated that the MHI of the water system service area is actually \$35,387. As a result, the Utility will qualify for Disadvantaged Community status and a 0.50% interest rate for the entirety of the multi-phased funded loan.

Year	Population		County		County Unemployment	
	City	% Change			Date	Rate
1980	7,789		19,049		June 2005	6.6%
1990	8,357	7.3%	20,353	6.8%	June 2010	10.4%
2000	5,914	-29.2%	22,094	8.6%	June 2015	6.6%
2010	6,845	15.7%	23,333	5.6%	June 2018	6.3%
Current	7,615	11.2%	24,302	4.2%		
Cumulative %		-2.2%		27.6%		

VIII. 2018 CAPITALIZATION GRANT EQUIVALENCIES

- 1) Green Project Reserve - The Drinking Water capitalization grant does not contain a “green” requirement.
- 2) Additional Subsidization – This project was not allocated principal forgiveness in this funding cycle. The project could be eligible for principal forgiveness in other funding cycles.

IX. FINANCIAL ANALYSIS

Financial information was obtained from the audited financial statements for the years ended June 30, 2016 through June 30, 2018. Morehead Plant Utility Board is comprised of water, sewer, and gas operations and has limited segregation in their financial statements. 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

Total revenues including water, sewer, and gas have increased 20% from 2016 to 2018 mostly due to rate increases. Water revenues increased 15% during that period, sewer revenues increased 18%, and gas revenues increased 33%. Historically, water has contributed the majority of cash available for debt service to the operation while also making up for deficits in sewer. Rate increases in the beginning of fiscal year (FY) 2019 will bring water and sewer almost equal in terms of cash flow available for debt service and other capital improvements. Total operating expenses increased 20% from 2016 to 2018. Water, sewer, and gas share administrative expenses which saw a 20% increase during this time period while water saw a 6% increase, sewer an 11% increase, and gas a 42% increase in operating expenses.

The 2018 balance sheet reflects a current ratio of 1.9, a debt to equity ratio of 0.4, 51.8 days sales in accounts receivable, and 1.6 months operating expenses in unrestricted cash. The debt coverage ratio from 2016 to 2018 was 2.0, 2.0, and 2.3, respectively.

PROJECTIONS

Projections are based on the following assumptions:

- 1) Water revenues for both residential and wholesale customers will increase approximately 16% in FY 2019 as a result of a rate increase. Water revenues will continue to increase in the five year forecast according to planned rate increases by the Utility based on their capital improvements plan and updated annually with KIA. Residential water rates are anticipated to increase an average of 16% from FY 2019-2021 while wholesale rates will be adjusted based on the wholesale customer's responsibility for debt service coverage for plant expansion projects. Only the currently known 2019 increase is factored into this analysis.
- 2) Sewer revenues will increase approximately 39% due to a rate increase in FY 2019 and remain flat thereafter.
- 3) Expenses will increase 2% annually for inflation.
- 4) Debt coverage is 1.4 in 2022 when full principal and interest payments for loan A19-032 and the first four increments of F19-002 go into repayment.
- 5) Debt coverage is 1.2 in 2024 when full principal and interest payments for the final two increments of F19-002 go into repayment.

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

REPLACEMENT RESERVE

The replacement reserve for this loan increment will be 5% (\$262,000 total) of the final amount borrowed (prior to principal forgiveness, if any) to be funded annually (\$13,100 yearly) each December 1 for 20 years and maintained for the life of the loan.

X. DEBT OBLIGATIONS

	Outstanding	Maturity
Bond Series 1966	\$ 15,000	2019
RD Series 2001A	3,427,000	2042
RD Series 2004	1,258,000	2044
KIA Loan (F00-05)	1,414,667	2023
KIA Loan (A04-02)	3,048,765	2026
KIA Loan (A10-16)	1,462,043	2033
KIA Loan (A209-36)	248,751	2031
KIA Loan (A209-37)	431,449	2032
KIA Loan (A16-065 i/a/o \$1,800,000)	1,482,651	2038
KIA Loan (F18-004 P&D i/a/o \$1,297,200)	0	TBD
KIA Loan (F19-002 i/a/o \$26,428,000)	0	TBD
Total	\$ 12,788,326	

XI. CONTACTS

Legal Applicant	
Entity Name	City of Morehead
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Applicant Contact	
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Project Administrator

Name	Jocelyn R. Gross
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Consulting Engineer

PE Name	Alan Ray Robinson
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Phone	859-433-9585
Address	113 W Mount Vernon St Somerset, KY 42501

XII. RECOMMENDATIONS

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

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

	Audited 2016	Audited 2017	Audited 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024
Balance Sheet									
Assets									
Current Assets	2,293,408	3,010,960	2,910,114	3,479,774	3,726,037	3,936,736	4,030,684	4,115,941	4,376,717
Other Assets	41,790,087	40,104,332	42,181,210	45,382,497	51,805,677	57,488,985	60,509,254	59,066,577	52,909,209
Total	44,083,495	43,115,292	45,091,324	48,862,271	55,531,714	61,425,721	64,539,938	63,182,518	57,285,926
Liabilities & Equity									
Current Liabilities	1,408,302	1,393,732	1,819,172	1,829,761	1,855,229	1,880,554	1,743,395	1,601,149	860,569
Long Term Liabilities	15,194,771	16,084,456	18,298,424	18,298,108	25,231,198	31,314,313	37,019,337	38,580,857	38,580,857
Total Liabilities	16,603,073	17,478,188	20,117,596	20,127,869	27,086,427	33,194,867	38,762,732	40,182,006	39,441,426
Net Assets	27,480,422	25,637,104	24,973,728	28,734,402	28,445,287	28,230,854	25,777,206	23,000,512	17,844,500
Cash Flow									
Revenues	9,403,121	9,990,829	11,271,041	13,394,448	13,394,448	13,394,448	13,394,448	13,394,448	13,394,448
Operating Expenses	7,150,384	7,657,223	8,591,321	9,415,854	9,653,012	9,894,913	10,199,552	10,451,225	6,094,886
Other Income	129,537	(27,263)	5,412	5,412	5,412	5,412	5,412	5,412	5,412
Cash Flow Before Debt Service	2,382,274	2,306,343	2,685,132	3,984,006	3,746,848	3,504,947	3,200,308	2,948,635	7,304,974
Debt Service									
Existing Debt Service*	1,171,067	1,170,694	1,176,634	1,300,087	1,284,214	1,397,964	2,008,899	1,844,135	2,021,704
Proposed KIA Loan (Phase 1)	0	0	0	0	0	0	251,926	251,926	251,926
Proposed KIA Loan (Phase 2)	0	0	0	0	0	0	497,862	497,862	497,862
Proposed KIA Loan (Phase 3)	0	0	0	0	0	0	0	0	342,909
Total Debt Service	1,171,067	1,170,694	1,176,634	1,300,087	1,284,214	1,397,964	2,260,825	2,096,061	2,273,630
Cash Flow After Debt Service	1,211,207	1,135,649	1,508,498	2,683,919	2,462,634	2,106,983	939,483	852,574	5,031,344
Ratios									
Current Ratio	1.6	2.2	1.6	1.9	2.0	2.1	2.3	2.6	5.1
Debt to Equity	0.6	0.7	0.8	0.7	1.0	1.2	1.5	1.7	2.2
Days Sales in Accounts Receivable	45.7	51.0	51.8	51.8	51.8	51.8	51.8	51.8	51.8
Months Operating Expenses in Unrestricted Cash	1.6	3.3	1.6	2.3	2.8	3.3	3.5	3.6	4.7
Debt Coverage Ratio	2.0	2.0	2.3	3.1	2.9	2.5	1.4	1.4	1.2

* Existing debt service includes pending loan A19-032 starting in 2022

Kentucky Infrastructure Authority

WRIS Funding Dashboards

The Kentucky Infrastructure Authority, pursuant to KRS 224.300, is charged with gathering information from various state and local governments regarding the issue of water resource development, and also to manage the Water Resources Information System (WRIS). The WRIS is recognized nationally as being the only database model of its kind that provides necessary information for all aspects of water resource planning, from source water to infrastructure development. The diverse geographic information system includes, but is not limited to, water resource maps, utility data, and project profiles. The WRIS also contains tools such as an asset management tab for utilities mapped within the database.

As of January 2019 the data indicates that approximately 96 percent of the population has access to public drinking water and 62 percent has access to wastewater treatment. However, the data also shows that Kentucky's infrastructure is aging. The average age of wastewater treatment plants in Kentucky is 33 years and 33.7 percent of sewer lines are over 50 years old. The averages for drinking water treatment plants is 40 years and water storage tanks is 39 years. There are over 57,000 miles of water lines mapped of which 22.5 percent are over 50 years old.

The WRIS Funding Dashboards were created as a proof of concept for using GIS technology to help present information that illustrates Kentucky's water and wastewater infrastructure funding needs over the next 20 years. Three dashboards have been created, thus far, as prototypes that will help pave the way for more engaging ways to interpret, interact, and analyze data within WRIS. These funding dashboards aggregate and display the WRIS information in a comprehensive and transparent manner using existing data sets relative to drinking water and wastewater utilities in Kentucky.

Each innovative dashboard is linked directly to Project Profiles in the WRIS Portal. When the data is revised the components are updated in real-time allowing users to view projects based on current information via three separate mediums. The function of each version is detailed below:

- By Region – This dashboard allows the user to filter down by Area Development District, County, Applicant, and/or Project Number. With each descending filter, all components of the dashboard update. Also included is a list of projects with basic details such as title, cost, and description, that are seeking funded. Upon filtering to a specific project, the map symbolizes the project. Graphs are designed to show the number of projects listed in the WRIS Portal by their schedule (0-2 years, 3-5 years, etc.) and the associated funding needs.
- By Region via mobile or tablet – This dashboard is a replica of the previous dashboard but optimized for mobile viewing on a tablet or phone.
- WRIS Projects by Legislative Districts – The dashboard filters the WRIS data either by House or Senate Legislative District and the District number. It allows quick access to visualize water and wastewater needs in that District. The process is similar to the previous dashboards in that all of the same information is present.