

Table 8  
Debt Service Requirements – Water System  
 Madisonville, Kentucky

Total Principal and Interest Requirements <sup>1</sup>			
Fiscal Year	Series 2012	KLC Funding Trust	Total Requirement
2018	\$1,043,346	\$180,373	\$1,223,719
2019	\$1,040,996	\$75,450	\$1,116,446
2020	\$1,043,296		\$1,043,296
2021	\$1,040,246		\$1,040,246
2022	\$1,036,896		\$1,036,896
2023	\$1,042,196		\$1,042,196
2024	\$1,041,076		\$1,041,076
2025	\$238,156		\$238,156
2026	\$238,594		\$238,594
2027	\$238,669		\$238,669
2028	\$238,375		\$238,375
2029	\$237,694		\$237,694
2030	\$236,619		\$236,619
2031	\$240,184		\$240,184
2032	\$238,387		\$238,387
2033	\$236,294		\$236,294
2034	\$238,819		\$238,819
	\$9,669,843	\$255,823	\$9,925,666

Note: <sup>1</sup> From Madisonville's Comprehensive Annual Financial Reports, for FY 2017 and FY 2018.

## Capital Improvements Plan - WTP

The City has developed five-year Capital Improvement Plans (CIP) for both the Water Distribution department and the Water Treatment Plant.

The major project necessary at Water Treatment Plant is the rehabilitation of the Green River Pumping Station. As mentioned previously, during dry months, the pump station and an 18-mile pipeline to the Green River replenishes 9.0 million gallons of water per day. From discussions with Chris Spriggs, Superintendent, this project is the highest



priority in the five year capital improvement plan. The cost of the rehabilitation is estimated at \$1.1 million. Other projects include rehabilitation of the J. W. McCoy Water Storage Tank, applying inner and outer coating to the North and South Clear wells, removing and replacing inner coating on the membrane tanks, and switch disinfection type from Sodium Hypochlorite to onsite generation of MIOX.

## Capital Improvements Plan – Distribution System

The five-year CIP for the water distribution system includes looping lines, replacing lines, and replacing fire hydrants. These improvements help to decrease water age, replace aging and undersized lines, along with increasing flow and pressure in certain areas of the system.

A summary of a five-year CIP is presented in Table 9. The cost estimates for future years include inflation at a rate of five percent annually. A summary of large (total cost exceeding \$500,000) capital projects included in the five-year plan is presented in Table 9. It is assumed that projects with a budget over \$500,000 will require the City to borrow funds.

Table 9  
Five-Year Water Capital Improvements Plan<sup>1</sup>  
 Madisonville, Kentucky

Fiscal Year	Department	Project/Item	Budget Cost
2020	Distribution	Looping Lines (Phase 1)	\$50,000
2020	Distribution	Bartlett Ave. to End of College Street	\$45,000
2020	Distribution	Distribution Panels	\$75,000
2020	Distribution	Fire Hydrants	\$20,000
2020	Treatment	Green River Pumping Station	\$1,100,000
2021	Distribution	Lake Pee Wee Road to Ada Lane	\$210,000
2021	Distribution	Green River Pipe Line	\$31,500
2021	Distribution	Looping Lines	\$52,500
2021	Distribution	Kentucky Street & Hall Street	\$25,000
2021	Distribution	Fire Hydrants	\$21,000
2021	Treatment	J.W. McCoy Water Storage Tank	\$630,000
2022	Distribution	Hanson Road	\$220,500
2022	Distribution	E. Broadway (Park Ave – S. Dave St.)	\$66,150
2022	Distribution	Fire Hydrants	\$22,050
2022	Treatment	N. & S. Clear wells (Coating)	\$275,625
2023	Distribution	Hanson Road	\$231,525
2023	Distribution	McPherson & Woodland Drive	\$46,305
2023	Distribution	Hartland Ave. – Eastview Drive	\$40,517
2023	Distribution	Fire Hydrants	\$23,153
2023	Treatment	Membrane Tanks (Coating)	\$144,703
2024	Distribution	Honeysuckle Drive (S. Main – Clearview Drive)	\$243,101
2024	Distribution	W. Broadway (College St. – Boggess Blvd.)	\$30,388
2024	Distribution	Fire Hydrants	\$24,310
2024	Treatment	Miox Conversion	\$607,753

Notes: <sup>1</sup>Budget Costs include inflation rate of five percent annually starting in FY 2021.



Table 10  
Planned Capital Improvements – Large Projects<sup>1</sup>  
 Madisonville, Kentucky

Fiscal Year	Department	Project/Item	Estimated Project Cost <sup>2</sup>	Committed Funds
2020	Treatment	Green River Pumping Station	\$1,100,000	0
2021	Treatment	J. W. McCoy Water Storage Tank	\$630,000	0
2024	Treatment	MIOX Conversion	\$607,753	0

Notes: <sup>1</sup>From Table 9; projects with budget cost exceeding \$500,000

<sup>2</sup> Budget costs include inflation rate of five percent annually starting in FY 2021.

## Required Revenue

Revenue requirements for future years will include operation, maintenance, and replacement (OM&R) costs, capital improvement costs, existing long-term debt service requirements, and future long-term debt service requirements.

An annual inflation rate of five percent was used for all OM&R and capital costs in future years. As previously stated, it was assumed that capital projects with a budget over \$500,000 will require the City to borrow funds. Annual debt service were based on a 20-year term, an interest rate of six percent, and debt service coverage factor of 25 percent of the required payment.

The estimated required revenue for the next five fiscal years (FY20 through FY24) is summarized in Table 11. The required revenue peaks at over \$7.096 million in FY24.