

WATER AFFORDABILITY CASE STUDY

Martin County, KY

Martin County is located in far eastern rural Kentucky. The county's economy was historically reliant on the coal industry. As coal use declined, poverty and unemployment rose. As of June 2024, Martin County has the highest unemployment in Kentucky, at 10.7%, which is more than double the state average of 5% and the U.S. average of 4.3%



(Workforce Intelligence Branch, Kentucky Center for Statistics, & Kentucky Education and Labor Cabinet, 2024). The County's median household income is 60% of the national level median household income. In 2022, 36% of Martin County was below the federal poverty threshold, compared to about 11.5% for the U.S. as a whole (U.S. Census Bureau, 2023d).

For decades, the County's Water District and its residents have struggled with loss of water pressure, water quality issues, and increasing water rates. Both water and sewer rates are high on an absolute basis compared to other utilities and are especially high for a low-income population. A 2019 report by the Appalachian Citizens' Law Center & Martin County Concerned Citizens found that water was unaffordable for over 45.8% of Martin County residents, with a 41.5% increase in water service cost since the previous year (Cromer & Draper, 2019).

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The water affordability crisis in Martin County has not improved in recent years. According to the Martin County Water and Sanitation District website, the estimated monthly water and sewer bill for 5,000 gallons of water usage is \$157.93 (Martin County Water and Sanitation Districts, 2024). This represents 4.2% of income for households at the County's median level of income and a remarkable 14.4% of income for households at the County's 20th percentile of income. Nearly 50% of households have a combined water and sewer bill that is more than 4.5% of their income, which is an affordability level that is typically considered stressful. Having more than 40% of households facing potentially unaffordable bills is a very high level of financial risk for a utility and its service area population to manage. An additional rate increase is expected next year.

Failing and aging drinking water infrastructure is the main contributor to these financial challenges. The Water District estimates that a significant volume of treated water is lost from leaks in its distribution pipelines before the water reaches customers. This means that a large portion of its operating costs to produce that water are wasted. The contractor that operates the Water District's

system has exceeded its contracted limit of repairs. The resulting cost overruns will lead to additional rate increases, causing even greater stress on the system and the community. Despite receiving a grant in 2017 for repairs and improvements to its raw water intake and water treatment plant, the intake pump still does not function correctly due to contracting issues and other delays. As a result, the District rents a duplicate diesel pump that costs \$30,000/month to rent and operate. Other key issues for the District include:

Arrearages and Disconnections – The Water District struggles with a high level of arrearages and disconnections as a result of customer nonpayment. In 2023, there were 349 residential water disconnections for nonpayment – about one in ten households. Despite the high disconnection rate, the District is still projecting that they will have to write off approximately \$45,000 of unpaid customer debt in 2024. This amount is less than the roughly \$60,000–\$70,000 of late charge fees received by the District each year. While this amount is a relatively small portion of the District's overall \$2.5 million of annual water customer revenue, unpaid customer debt is a problem that has increased steadily over time.

Wastewater system – The Martin County Sanitation District operates two wastewater treatment plants. One was constructed in the late 1980's and struggles with compliance challenges due to its aging infrastructure. A second plant was funded in 2015, however, only about 20% of homes within the service area were required to connect to it. In total, about 870 households are connected to the District's sewer system, compared to the approximately 3,500 households that are connected to the drinking water system. This results in high operation and maintenance costs for the limited population served. That high cost is passed along to the rate payers, which include some of the poorest households in the County.

Workforce Challenges – The District struggles with water workforce turnover. As a small system, the District is unable to compete with the wages that larger systems can pay. This turnover results in high costs to train new employees, and lack of consistent knowledge of the system contributes to the community's mistrust of the water system.

While the District's primary goal is to obtain funding to fully repair its aging infrastructure and fix the leaks in its distribution system, Martin County also recommended two main changes:

Federal Customer Assistance for Low-Income Residents – Martin County is not able to support a local Customer Assistance Program because of its small population size and high percentage of low-income customers. In the absence of more permanent support, a member of the community group, Martin County Concerned Citizens, draws from her background in social work to help connect members of the community with resources for assistance, including LIHEAP for assistance with energy bills and SNAP for assistance with food. However, there is no available program for water assistance. A permanent federal customer assistance program would assist both the community members facing growing arrearages and disconnection and reduce the District's associated customer debt due to nonpayment.

Change in Grants – Funds for ongoing O&M assistance, contractor oversight for infrastructure project grants, and workforce development and retention are needed, especially in the form of grants to small, disadvantaged communities.