A wastewater treatment lagoon in the Wellsgate subdivision in Oxford, Miss., on Monday, March 10, 2025. Credit: Eric Shelton/Mississippi Today

FRAGMENTED & FAILING: MISSISSIPPI'S UTILITY SYSTEMS

'Trainwreck on the horizon': The costly pains of Mississippi's small water and sewer systems

by **Alex Rozier**
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This is the first of a two-part story.

"This state ain't nothing but a big Jackson," Central District Public Service Commissioner De'Keither Stamps said during a December meeting that harkened back to his time as a capital city councilman. "We got a whole statewide trainwreck that's on the horizon."

Over a thousand drinking water systems, most of them small, and hundreds of additional sewer systems operate in Mississippi. Nearly 60 percent of those water systems, according to the Environmental Protection Agency, have committed a violation in the last three years, and one in three sewer systems in the state have violated pollution limits in just the last year.

In 2014, a couple in DeSoto County, the wealthiest part of the state, sent a letter with photos of their yard to the Mississippi Department of Environmental Quality. Tarnishing their garden were small clumps of feces and wads of wet toilet paper stuck together.

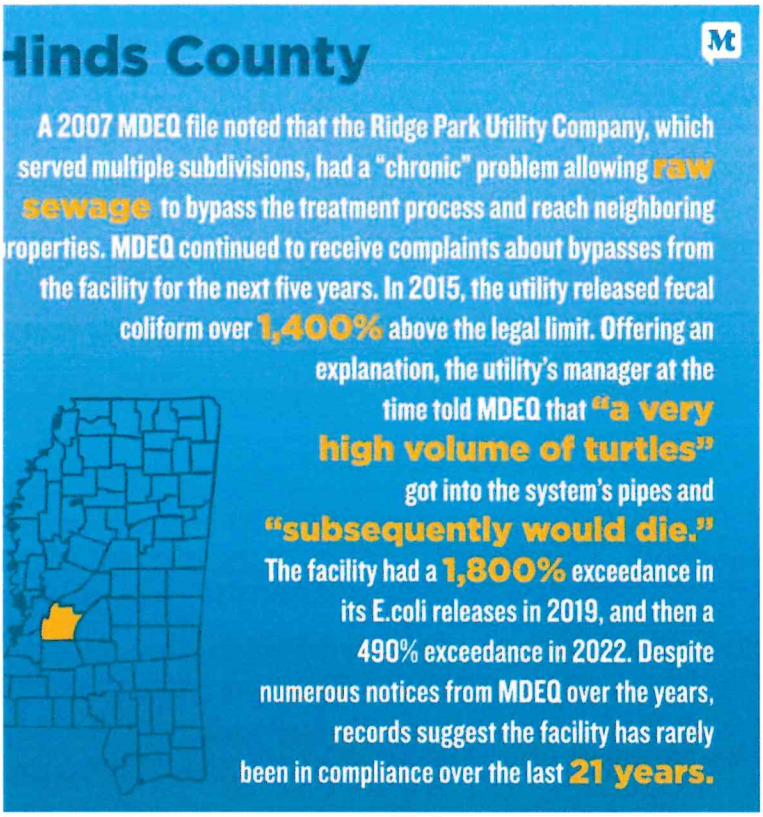
"When having company with children playing in our backyard last summer, suddenly, water and sewage began rushing out of the back flow valve, into the flower bed, across our yard and into the backyard where the children were playing," the Olive Branch couple wrote. "Everyone had to come inside due to the sewage rushing in our yard…This went on for several hours."

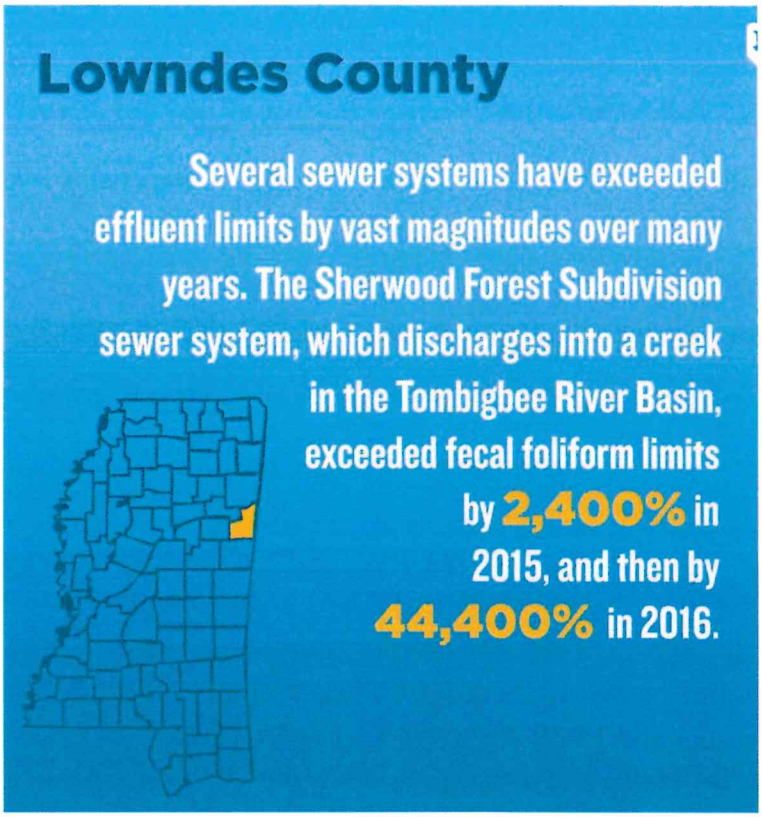
Back flow Valve Next Day - Notice Toilet Paper with Sewage

The culprit, MDEQ later identified, was the malfunctioning collection system at the Belmor Lakes Subdivision sewage treatment facility, which serves about 200 people. The couple continued sending complaints the next four years, while the state sent repeated notices of violation to the plant's operator. The facility allowed sewage overflows from at least 2011 to 2020, records show, and it remains out of compliance to this day.

Another facility, at the Openwood Plantation in Vicksburg, exceeded fecal coliform limits as early as 2004. A 2011 inspection noted the plant's effluent structure "has been leaking for at least two years, still not repaired." The next year, a neighbor complained to MDEQ about a funky smelling green liquid on their property. The agency found not only was the treatment plant responsible, but it also leaked raw sewage that flowed into a local recreational lake. Over two decades after the initial violation, the facility still regularly exceeds, by significant degrees, water pollution limits for chemicals such as E.coli, chlorine and ammonia nitrogen.

Small water and sewer systems around Mississippi have for years struggled to stay afloat because of, to some degree, the nature of being a small water or sewer system. Now, as they try to correct deficiencies during a time of growing regulations and higher costs, many cash-strapped systems are facing the hard reality of needing to raise rates for necessary services in the country's second poorest state.





"System officials think that part of the job is to hold rates at a low level, and that doesn't necessarily jive with what the need is," said Bill Moody, director of the Bureau of Water Supply at the Mississippi State Department of Health.

Moody spoke anecdotally of system owners who bragged about keeping rates low, unaware of the revenue shortfall they would soon have.

A 2023 EPA report on funding needs for drinking water systems found that, over the next 20 years, Mississippi will have an $8.1 billion need. That equals $2,751 per Mississippian, the fourth largest per capita need of any state. Small systems in the state had a per capita need 26% higher than that, the report's data shows, equalling $3,456 per person.

Treated water at a water treatment facility in the Wellsgate subdivision in Oxford, Miss., on Monday, March 10, 2025. Credit: Eric Shelton/Mississippi Today

The United States, and especially Mississippi, suffers from what industry wonks call "fragmentation." Compared to other countries, the U.S. has a spread out population, meaning its utilities are spread out, too. But by having so many water and sewer systems serving small pockets of people, scant infrastructure funding is spread to the point it loses spending power.

"The problems the city of Jackson has had, for instance, is replayed over and over and over again in these smaller systems," said MDEQ executive director Chris Wells. "What you have is these small systems that, for one reason or other, aren't properly functioning."

For instance, Wells explained, a developer with no utility experience might build and operate a sewage lagoon to serve a subdivision. Sometimes the developer moves or dies and passes the reins onto the homeowners association.

"We've had situations where the person who built the lagoon or the treatment system literally disappears, abandons the system," Wells said.

While consolidating small systems would help, experts say, some are so far behind that their customers' bills will go up regardless.

"It gets a little depressing, I don't know what the answer is," Greg Pierce, a water policy **expert** at the University of California, Los Angeles said. "Usually these systems are under-maintained. They have low rates, but they also have low quality and low reliability."

Each year, the Health Department takes the temperature of the state's drinking water systems. In the last two years, the agency found 83 providers that were in "poor" condition. While the median population for a water system in Mississippi is around 1,400 people, that number drops to 422 for the "poor" performing systems, about 80% of which serve under a 1,000 people.

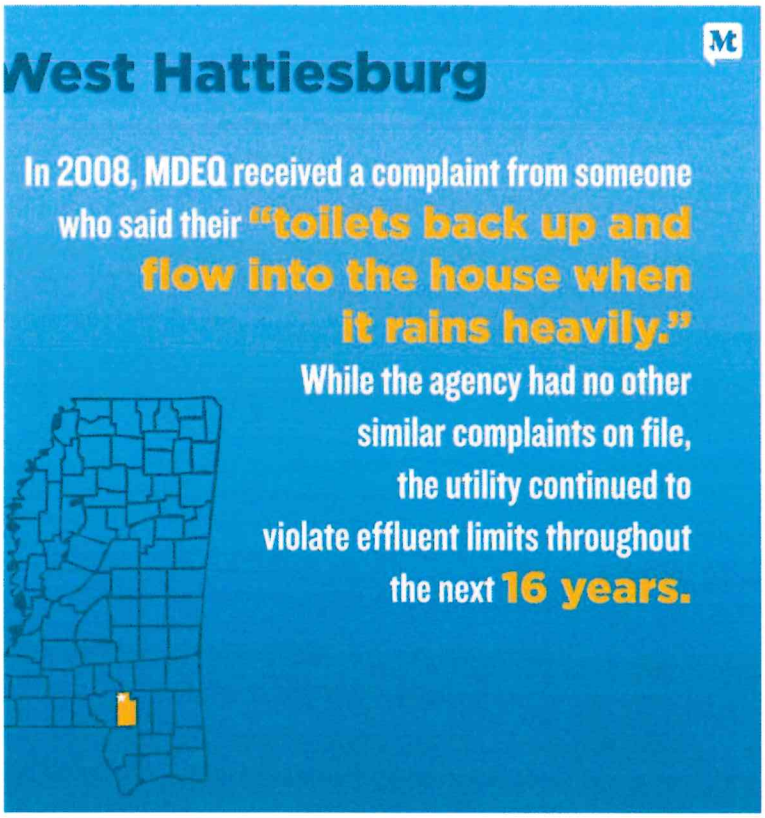
In the small town of Utica, for instance, the Reedtown Water Association has frequent power outages and boil water notices. Stamps, the Public Service commissioner for the area, said necessary repairs would cost $4 million to $5 million, "an amount far beyond what the water association and its (1,200) customers can afford."

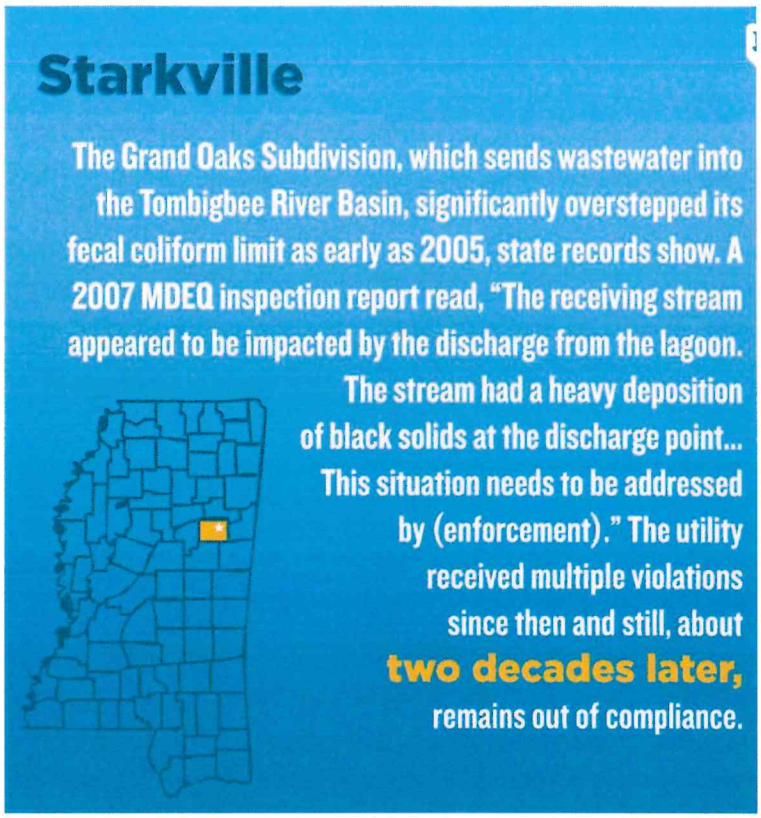
One water association with just 829 customers – Cascillia, in Tallahatchie County – had 83 violations in just the last 5 years, including exceeding arsenic limits in 2023. Several other small water systems (such as the **Moore Bayou Water Association** in Coahoma County, or **Truelight Redevelopment** in Sharkey County) are considered "serious violators" by the EPA for, in part, not meeting limits on **disinfectant byproducts** that were set in 2006. Of the state's 19 "serious violators," more than half serve 1,200 or fewer people. The EPA defines a small water system as serving 3,300 people or fewer.

Kyle Cummings stands next to a water tank as he discusses the treatment process at a water treatment facility in the Wellsgate subdivision in Oxford, Miss., on Monday, March 10, 2025. Credit: Eric Shelton/Mississippi Today

Smaller systems struggle nationwide. A **2018 study** from researchers at the University of California, Irvine and Columbia University found that systems in rural areas around the country see "substantially" more violations than those in urban areas.

Wells, of MDEQ – which oversees sewer compliance – said it's a challenge motivating struggling systems to meet permit limits. The state can technically take over a system, but MDEQ doesn't have the resources to do so, and levying large fines can be counterproductive because ratepayers ultimately have to make up the difference.





"Every dollar that we take in penalties is one less dollar that the community has to spend toward the upgrades that they need to make," he said.

Wells described that, for some repeat offenders, sending them violation notices is like "trying to get blood out of a turnip." While MDEQ works with systems to correct deficiencies, he said, sometimes the best answer is a third-party utility coming in to save the day.

The American Society of Civil Engineers' 2024 "Infrastructure Report Card" estimated that Mississippi, between all its water and sewer systems, needed $9.4 billion in investments over the next 20 years.

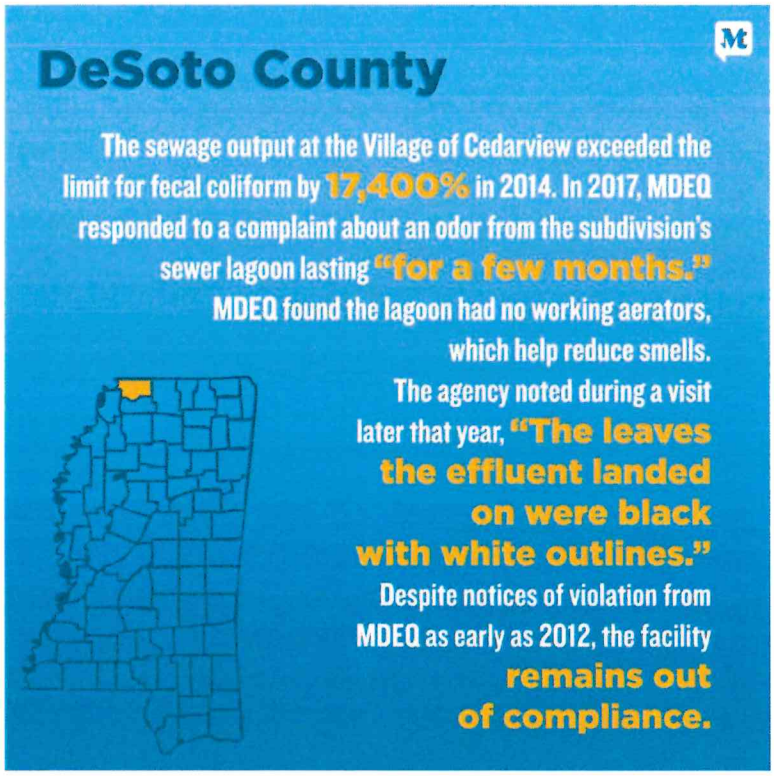
"The capacity of drinking water systems in the state is mediocre," the report says, adding that "wet weather conditions, inconsistent maintenance, and a lack of rehabilitation pose extreme threats to the state's wastewater infrastructure."

Soda ash at a water treatment facility in the Wellsgate subdivision in Oxford, Miss., on Monday, March 10, 2025. Credit: Eric Shelton/Mississippi Today

Between the historic amounts of federal funding from the American Rescue Plan Act and the Infrastructure Investment and Jobs Act, Mississippi received roughly $1.2 billion for water and wastewater improvements, or just 13% of the state's projected need.

Especially with **large expenses** looming to meet the new national standards for PFAs, some small systems are looking to consolidate to ease financial headaches. The Oxford Eagle **reported** last year, for instance, that the Punkin Water Association would soon join the city of Oxford's service area after years of water quality issues.

But given the spacial challenges of connecting far apart systems – especially in Mississippi, which, according to Census data, has the fourth most rural population of any state – some say there are limits to how much water providers can actually unify.



"When it comes to the physical pipes in the ground, you can't move them," said Mildred Warner, a professor of city and regional planning at Cornell University, explaining that many systems can only consolidate in terms of management.

Mississippi is experimenting with consolidating management for some of its small, privately owned water and sewer systems. In 2021, a company called Great River began buying struggling systems around the state. A subsidiary of the national firm Central States Water Resources, the company focuses on struggling, poorly financed systems that most large utility firms wouldn't touch. Now operating in 11 states, the company has access to more resources than what a small operator would, and can reduce overall costs by spreading them out throughout its service area.

In Mississippi, part of the PSC's job is to make sure private utilities that have a monopoly over a given service area, like Great River, only charge customers for what their services are worth, plus enough profit to stay in business. Given the challenges of some small systems in the state, the PSC welcomed the company's help. But Great River, as is common when a large private utility takes over, quickly imposed steep rate increases to fund its repairs.

As Great River's ratepayers plead with the PSC to soften the financial blow, the condition of some Mississippi water and sewer providers suggest those basic services will have to cost much more than they used to, especially for customers of small systems.

Part two of this story will further explore the Great River's impact on ratepayers, and what the future holds for small water and sewer systems struggling to stay afloat.