



Small Town, Big Cash Reserves and Capital Planning: Town of Cleveland, North Carolina

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and wastewater utilities developed by



Background on Cleveland, North Carolina

The Town of Cleveland is located halfway between Winston-Salem and Charlotte, about an hour from each city. As Charlotte continues to grow,¹ Cleveland officials anticipate the expansion will spur growth for Cleveland as well. The town's population experienced an annual growth rate of 9.28% from 2010 - 2019.² The Cleveland water system currently serves approximately 389 connections.³ Median household income (MHI) in Cleveland is \$54,000 with a poverty rate of 17.3% compared to the NC average MHI of \$57,341 and poverty rate of 13.6%.⁴

In addition to increasing population, two new industrial complexes may also come to the town of Cleveland in the next few years, impacting Cleveland's wastewater capacity. This potential growth has led the town to complete an engineering study. The study suggested Cleveland needs to expand to 400,000 - 500,000 gallons/day wastewater treatment capacity, from their current 275,000 gallons/day, if the new industrial parks come in. The next step for Cleveland is to do a financial analysis on how to fund the projects which are estimated to cost \$8 - 9 million, equivalent to more than \$20,500 per connection for the current number of accounts. One idea they have is to investigate whether the new industrial complexes can help fund the wastewater treatment expansion. Cleveland also has enough reserves, approximately 3-4 years cash-on-hand, that can help with paying for capital projects. The Town of Cleveland is preparing both its finances and infrastructure to support potential growth.

¹ Portillo, A. (2019, September). "[Charlotte is growing - literally - as the city annexes more land.](#)" *UNC Charlotte Urban Institute*.

² [American Community Survey](#). Cleveland town, North Carolina. Table DP05. *United States Census Bureau*. 2019. <https://data.census.gov/cedsci/table?text=DP05&g=1600000US3713000&tid=ACSDP5Y2019.DP05>

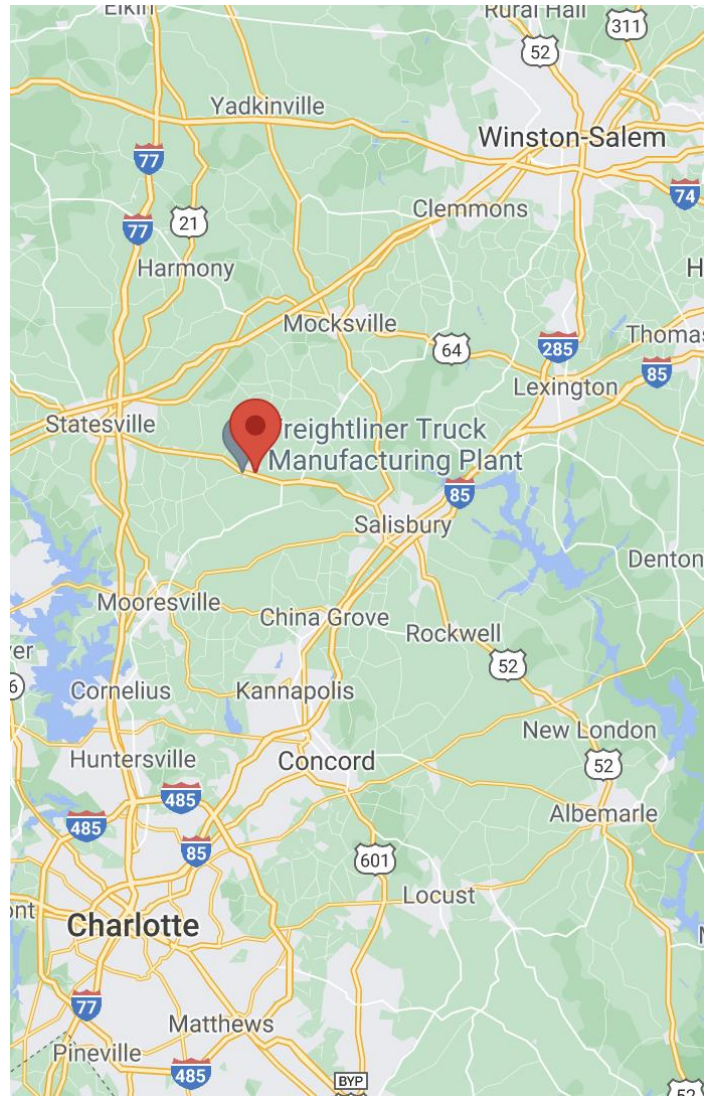
³ [Local Water Supply Plan: Cleveland](#). *NC Department of Environmental Quality: Division of Water Resources*. 2020.

⁴ [American Community Survey](#). Cleveland town, North Carolina Profile. *United States Census Bureau*. 2019. <https://data.census.gov/cedsci/profile?g=1600000US3713000>.

Cleveland's Water and Wastewater Systems

Cleveland manages its own water and wastewater systems with two water towers and a wastewater treatment plant. Cleveland maintains a level of resilience in providing services during emergencies because of its connection with the nearby Salisbury-Rowan Utilities. Cleveland and Salisbury-Rowan Utilities' water systems are interconnected, so they can purchase water from each other in case of emergency.

Cleveland's water and wastewater utility currently has three employees: two maintenance workers and a wastewater treatment operator. The maintenance workers are certified to work backup on the water system and wastewater system, which allows flexibility in their work and prepares them for advancement if they wish to apply for a supervisor position in the future. The town is considering potentially hiring a third maintenance person. The town does have some issues with retaining labor but incentivizes people to stay by offering first class benefits including a starting wage of \$15/hr, paid vacations, insurance, and a 2 percent wage increase with additional certifications. Each year there's a cost-of-living wage increase. The board also encourages employees to obtain more training, attend seminars, and network. One of the board's six members is a Water, Sewer, and Personnel Commissioner responsible for checking in on water and sewer operations and helping with reserves. Cleveland's finance officer, who doubles as the town clerk, has been with Cleveland since 1993 and has played a significant role in building up reserves for the utility's Enterprise Fund.



Map showing Cleveland between Winston-Salem and Charlotte. Image from Google Maps.

Planning Paves the Way for Financial Viability and Infrastructure Improvements

Capital Investments

Cleveland is continually investing in their water and wastewater infrastructure using money from their reserves. In the past five fiscal years, Cleveland has spent, on average, \$164,000 per year on capital outlays for their water and wastewater systems.

Cleveland is committed to sustainably funding their expansion through their reserves and utility revenues and not relying on grants or external funding. The Town maintains a Capital

Improvement Plan to identify and plan for capital projects.

Their five-year financial projection accounts for all

known capital costs and helps the board decide whether they have enough reserves to pay for the projects and how high rates need to go to build the reserves back up again.



One of Cleveland's Two Water Towers. Photo from Town of Cleveland Website.

Cleveland's Capital Improvement Plan, paired with their financial projections, guides investments in infrastructure. In the past 5-6 years Cleveland has replaced three of its four pump stations with the fourth projected to be replaced in 2022. Cleveland is adding a second contact chamber, which is a step towards increasing wastewater capacity. The Town replaced drinking water lines starting in 2008 and finished in 2019. The 35-year-old wastewater lines are now up for repair/replacement. The Town invested in equipment to conduct the sewer line system inspection internally. They expect the inspection to take 3-4 years with one street completed at a time.

Cleveland's water towers have been inspected every three years for the past 14 years. In December 2020, Pittsburg Tank, out of Kentucky, conducted the most recent inspection. One of the Town's tanks will be cleaned inside and out and painted for approximately \$200,000. The other tank, which was originally built in 1896 and obtained by Cleveland in the 1940s, will be replaced for approximately \$500,000. Cleveland will bid out the tank work. All of this capital improvement work is possible because of Cleveland's financial planning and reserves and willingness to raise rates as needed.

Weathering the pandemic

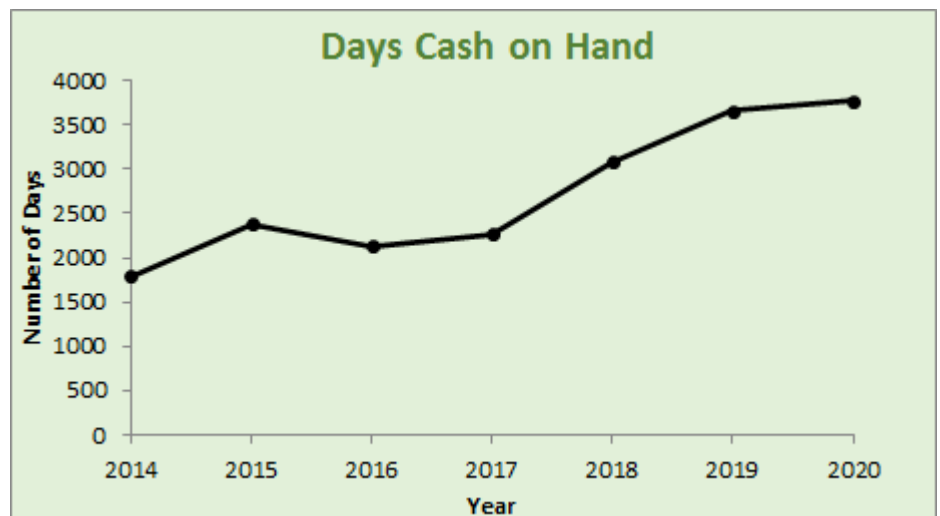
Even through the uncertainty and changes to operations due to the COVID-19 pandemic, Cleveland was able to maintain its water and wastewater service and systems. A retired general maintenance supervisor was hired back on as a part-time, on-call worker and was able to fill in for any person, given his previous experience with the Town. Cleveland has applied for Covid-relief funds and will likely be allocating some towards maintaining infrastructure.

Rates and the Strategy for Maintaining High Reserves Year after Year

As of January 2021, Cleveland's water rates were a uniform rate of \$3.46 per 1,000 gallons with a monthly administrative charge of \$12.65. Uniform rates minimize large variations in revenue based on fluctuations in water usage, allowing Cleveland to plan for revenues with more certainty. Wastewater rates have three different rate classes: residential, commercial, and industrial. The residential rate is \$5.42 per 1,000 gallons with a monthly \$10 administrative charge, the commercial rate is \$6.52 per 1,000 gallons with a \$13.34 administrative charge, and the industrial rate is \$11.34 per 1,000 gallons with a \$20.01 administrative charge. Industrial rates are highest because industrial waste often is more costly to treat because of the chemicals, debris, and other materials it may contain. Outside town rates are double inside rates for water and wastewater.

The Town Board utilizes a trend chart to look at flow patterns in the wastewater treatment plant. The Town's finance officer annually reviews rates and provides 5-year financial projections. Preparing for large capital improvement projects, the Town Board recently voted to increase water and wastewater rates by 5% for fiscal year 2021-2022; the first increase since 2015. The rate increase allows for infrastructure spending while maintaining the Town's cash reserves and only increases the average household water and wastewater bills by \$3/month.

Cleveland's Fiscal Year 2020 expenses for operations and maintenance (excluding depreciation) for the water and wastewater Enterprise Fund were \$248K compared to their \$2.5M in unrestricted cash and investments. That means, even if Cleveland received no more revenue, they could cover expenses for 3,775 days. Cleveland's number of days cash on hand (a measure of reserves) has



more than doubled since Fiscal Year 2014 from 1,792 to 3,775 days cash on hand. The

unrestricted cash and investments are not allocated or designated for specific purposes and funds are available for upcoming projects and emergencies. Cleveland's water and wastewater funds are completely separate from the General Fund, with no transfers between funds. Money may be lent from the General Fund to the Enterprise Fund but must be paid back as a loan. Five-year planning helps maintain water/wastewater funds despite there being no minimum reserve target. Cleveland attempts to use reserve funding for large capital projects instead of borrowing to avoid paying interest on loans.

Maintaining Financial Viability by Encouraging Industry

Daimler's Truck Manufacturing Plant in Cleveland is essential to the Town's success. The plant is the largest freightliner plant in the United States⁵ and Cleveland's biggest wastewater customer, accounting for half the Town's wastewater capacity. Cleveland maintains a good relationship with the company by hosting meetings with them and maintaining open communication. One of the town's board members is an employee at Daimler, so the company stays abreast of Town plans, such as rate increases. The plant's maintenance engineer informs Cleveland if Daimler plans to adjust processes that may affect wastewater treatment. On a monthly basis, Daimler sends reports of their wastewater pretreatment activities and levels to the Town. By maintaining a stable relationship, Cleveland encourages Daimler to stay in town and shows the town is hospitable to industry and can plan for variation in wastewater treatment given Daimler's communications.

More industries are potentially coming to Cleveland. Duke Energy has laid out plans for 100 acres across from Daimler. Duke Power is also involved with 50 acres which is zoned for industry. Four miles from Cleveland, a manufacturing plant is also available for reuse since shutting down in 2012. With these properties up for sale, town leadership is considering the implications of expanded industry presence, such as a large increase in wastewater volumes, on Cleveland's wastewater system.



Daimler's Cleveland Truck Manufacturing Plant. Photo credit: LiveMint.com

⁵ Cleveland, NC Truck Manufacturing Plant (DTNA LLC). *Daimler*. 2021

Recommendations

Have dedicated staff look out for water/sewer systems

Assigning a person to oversee the water/sewer systems and track operations and maintenance can help keep towns on top of capital improvement projects and finances. Cleveland has a commissioner specifically dedicated to Water, Sewer, and Personnel contributing to maintaining viable systems. The Commissioner ensures contracts are honored and receives monthly reports from the staff involved with the systems.

Look ahead

Planning at least five years ahead allows Cleveland to set rates to accommodate capital improvement projects and maintain cash on hand for future projects and emergencies. Looking at least five years ahead can keep a system from falling behind on maintenance.

Keep systems in good repair with routine maintenance and capital improvements

Keeping infrastructure in good condition by investing in their rehabilitation and replacement prevents emergencies, which can be costly potentially requiring rushed work orders. If external funding is needed to address an emergency, acquiring a loan quickly can result in a higher interest rate via commercial loans than when loan applications are planned for in advance and low-interest loans offered by the state and federal agencies can be accessed. Planning ahead and regularly investing in the infrastructure also allows the town to manage its financial resources and avoid taking out loans altogether, as is the case with the Town of Cleveland. Maintaining their systems allows Cleveland to invest in larger projects, which increases their efficiency and promotes growth. Cleveland's board and financial officer confer to set rates yearly, based on their five-year plan, which allows annual flexibility with a progressive outlook. The rates are set to sustain systems and maintain their reserves which they use to meet maintenance and improvement needs.

Maintain Funds for Water/Sewer separate from the General Fund

As a standard, water and wastewater Enterprise Funds are separate from the General Fund, and should be maintained to be self-sufficient. Transfers between those funds should be avoided, except when reimbursing for related costs that were covered by the other fund, or for transactional transfers to pay for services and costs from the appropriate source of revenue. Funds should not be transferred between the Enterprise Fund and General Fund for purposes of permanently supplementing a fund's revenues. Temporary loans between funds may be necessary but should be paid back, and may indicate that a fund might not be currently financially self-sufficient.

Develop and invest in employees

Long-term employees can help with long-term planning along with operations and maintenance because they know the system intricacies. They can also be recruited for part-time and on-call work during tough times as Cleveland's prior maintenance supervisor was called on during the pandemic. A Town of Cleveland official highlighted the importance of hiring team players, not just people who have the right credentials. Encouraging career development and preparing

employees for advancement, as Cleveland does, demonstrates growth possibilities in a small town.

Maintain good relationships with industry and promote further growth

Cleveland and Daimler's good relationship is a large reason for the Town's water and wastewater systems' financial success. The relationship is maintained with mutual and frequent communication. Cleveland demonstrates it will be able to accommodate more industry as the Town prepares to increase wastewater capacity.

Cleveland's practices can hopefully set an example to other small systems that wish to build and maintain a viable water and wastewater utility.



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