Ongoing Impacts of COVID-19 on North Carolina Utilities Through December 2020

Environmental Finance Center

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Environmental Finance Center

About the Environmental Finance Center

The Environmental Finance Center at the University of North Carolina at Chapel Hill is part of a network of university-based centers that work on environmental issues, including water resources, solid waste management, energy, and land conservation. The EFC at UNC partners with organizations across the United States to assist communities, provide training and policy analysis services, and disseminate tools and research on a variety of environmental finance and policy topics.

The Environmental Finance Center at the University of North Carolina, Chapel Hill is dedicated to enhancing the ability of governments to provide environmental programs and services in fair, effective, and financially sustainable ways.

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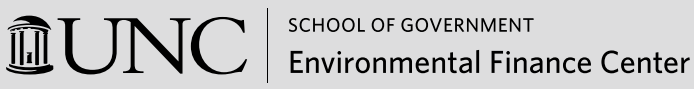

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Table of Contents

Executive Summary 4
Introduction 7
Timeline of Events 10
Key Themes and Impacts 12
Disconnections 17
Payment Plans 20
Other Customer Assistance 22
CARES Act Funds 23
Policy Takeaways 24
Looking to the Future 33
One-Page Summary 34
Appendix A: Survey Method 35
Appendix B: Case Studies 36
Appendix C: Helpful Resources 40
Appendix D: Complete Works Cited 41

Executive Summary

To scroll to a one-page graphic summary, click here

In the fall of 2020, as one of multiple research projects funded by the NC Policy Collaboratory, the EFC assessed the ongoing impacts of the COVID-19 pandemic on water and wastewater utilities in North Carolina to help inform state decision makers about the financial fallout and potential relief needs of these utilities. The EFC research focused on the various impacts experienced by these utilities during the months of August through December 2020 and looked specifically at the impacts of Executive Orders 124 and 142 (EO 124/142), which prohibited residential disconnections due to non-payment and required the institution of payment plans. This research follows from previous work published in August of 2020 that assessed impacts from the COVID-19 pandemic from March through July 2020.

The EFC has been collecting water and wastewater rates, as well as other financial data from North Carolina's utilities for more than a decade. However, to better understand the specific impacts on utilities from COVID-19 and EO 124/142, the EFC sent out a survey and interviewed staff at 16 utilities across the state. Some broad themes emerged from the EFC's research. First, utilities experienced lost or delayed revenue for a variety of reasons. Second, utility staff needed extra time and effort to serve customers and create payment plans. Third, utilities experienced challenges associated with distributing assistance funds to both customers and utilities. Examples of specific impacts reported include:

Disruptions to office and field operations: Many utilities were forced to close offices and adjust payment processes to allow for socially distanced and online payment options. Field operations were also modified to accommodate social distancing and safety measures.

Lost revenue from changes in consumption patterns and prohibition of late fees: Utilities that rely heavily on revenue from large customers are vulnerable to reductions in consumption resulting from shutdowns, and many utilities saw a decrease in larger commercial and institutional usage and a shift to residential usage. Additionally, utilities were prohibited by EO

1. "COVID-19 and North Carolina Utilities", EFC at UNC, August 26, 2020

124/142 from charging late fees on utility bills that were due between March-July 2020. Revenue lost because of changes in consumption or lack of late fees can never be recovered.

Delayed revenue from delinquencies and payment plans: Utilities were required by EO 124/142 to set up 6-month payment plans, and many offered payment plans longer than that for past due bills (delinquencies) accumulated by customers between March-July 2020. Creating and implementing these payment plans required significant effort from utility billing staff, but most of that work was completed in the months following expiration of EO 124/142 (Aug/Sept/Oct).

Interruption to typical collection practices (such as disconnecting for non-payment): Utilities are still navigating the transition back to historic collection practices and many found that customer disconnections resumed between August-October 2020 (following expiration of EO 124/142), many customers paid their past due balances in full.

Lack of clarity for how to use assistance funding led to confusion: Some utilities received funds from the CARES Act distribution, though many had a hard time interpreting the guidance and deciding whether or not to use those funds to help customers with past due bills. The financial assistance for utilities helped to cover costs for cleaning supplies, extra shifts, personal protection equipment (PPE), and supplies for employees to work from home but was not enough to cover shortfalls in revenue caused by other factors.

Several policy takeaways also emerged from the EFC's research that can inform future decision-making. In order to be effective, a system for providing financial relief to local governments and utility customers, needs to be in place prior to an emergency occurring. Distributing funds to customers in need is a large undertaking, and many counties, utilities, and non-profit partners have struggled during the COVID-19 pandemic to get the large influx of assistance funds to customers in a timely manner. In addition, flexibility and an understanding that diversity of strengths and challenges for utilities across the state is necessary to create mandates that help both customers and utilities in emergencies. Utilities vary widely, and prior knowledge of a utility's customer base, financial position, billing software, number of staff, infrastructure

needs, and customer delinquencies are important in setting policies to efficiently address emergencies. Support for the development and funding of bill payment assistance programs prior to an emergency is also needed. Ongoing support for these programs will improve the ability of customers to get assistance in paying bills, which leads to a more financially stable utility. While state and federal support for local governments and utilities at a time of emergency is important, support for the long-term viability of utilities to enhance their resilience against future crises could provide lasting benefits and improve their ability to address challenges locally.

Looking forward

The COVID-19 pandemic is far from over and the need for water and wastewater services to protect public health remains critical. Since the expiration of EO 124/142 many utilities have experienced a return to more historic collection practices, however consumption patterns in many areas continue to be impacted by COVID-19. The effect on utility customers as lengthy payment plans end and any payments (which may be large, if the customer was not able to complete the payment plan and/or continued to accrue bills) will be seen in 2021. As 2021 continues, some utilities will recover bills that were past due or gain a better understanding of what portion of past due bills may prove uncollectable. The effects of delayed revenue and rate increases as well as deferred capital improvement projects will be seen in the months and years to come.

Introduction

Even before the COVID-19 pandemic, utilities across NC varied greatly in financial health, but the pandemic has highlighted even more both the importance of water and wastewater utilities in protecting public health as well as the disparities between utilities that are financially stable and those that are not. Executive Orders 124 and 142 provided important protection for North Carolinians by prohibiting utilities from disconnecting residential customers for non-payment and requiring payment plans. Both of these requirements increased the need for communications and outreach from utility staff and decreased or delayed revenue for utilities.

Overarching Context: The Importance of Clean Water in a Pandemic

During emergencies, the critical role that water and wastewater systems play in public health is emphasized, along with the need to keep their services well-funded and operational. The availability of clean water is crucial to fighting viral outbreaks as CDC guidelines recommend that people stay at home as much as possible and practice more frequent handwashing as preventative measures against COVID transmission[2]. Water also plays an important role in most types of cleaning, from scrubbing bleach solutions on surfaces to laundering contaminated clothing at home and in health care settings.

Equally essential is the role that wastewater services provide in preventing the spread of disease. Without effective public sanitation, a variety of disease agents can fester and sicken people in the area. Wastewater overflows are a major environmental and health issue that impacts residents across North Carolina, with approximately 8,500 sanitary sewer overflows reported between 2012 and 2018 in the state. Preventing wastewater overflows from inundating streets and basements is necessary all the time, but especially so as people spend more time indoors.

Challenges of any utility: Rates and Service

The water and wastewater sectors are committed to providing service to all households, and many illustrated this commitment by prohibiting disconnections for residential customers in early or mid-March, regardless of those customers' ability to pay. As the later Executive Order from Governor Cooper stated, "utility services are essential to the continued health and safety

2. Centers for Disease Control and Prevention. How To Protect Yourself and Others

of residential utility customers" EO 124[3], pg 2. However, shutoffs can be a powerful tool for utilities to encourage payment. Once revenue streams are impacted, utilities begin to face a new set of challenges. These challenges can include delaying much needed infrastructure investments, reducing staff to save costs, and raising rates at a time many households are already struggling to pay bills that are past due.

Both large and small systems share challenges in providing quality service to their communities. Systems are often burdened with aging infrastructure and may employ older staff and operators that are more vulnerable to COVID-19. In general, the water workforce tends to be older and are expected to retire from their positions in years to come, creating a huge gap to fill for utilities and other water employers[3]. During the pandemic many utilities underwent changes in work schedules, with treatment plant operators working in shifts to reduce the possibility of a workplace infection overwhelming the utility. Changes in the availability of treatment plant operators pose greater concerns for small utilities, which have fewer personnel to rely on as compared to large urban systems.

The composition of a utility's customer base also determines the level of impact that pandemic conditions will have on the revenue stream. For example, a utility with a greater proportion of revenue from a commercial or institutional (e.g., universities, museums) customer relative to residential revenue may be either insulated or more vulnerable, depending on whether the business or institution is forced to suspend operations for an extended period or is considered an essential operation. COVID-19 prevented businesses, such as large manufacturing factories, from operating at full capacity by forcing workers to take a hiatus from coming into work. This ultimately lowers water and wastewater usage and therefore revenue for the utility. A utility weakened by COVID-19 is also less able to build capacity and encourage economic growth in an area. Not only does clean water help reduce the prevalence of health issues in a community, but sufficient capacity of water and wastewater services can attract businesses and keep basic institutions (schools, government facilities, fire protection units) functioning.

Upgrades to water system infrastructure to meet current needs related to delivering safe drinking

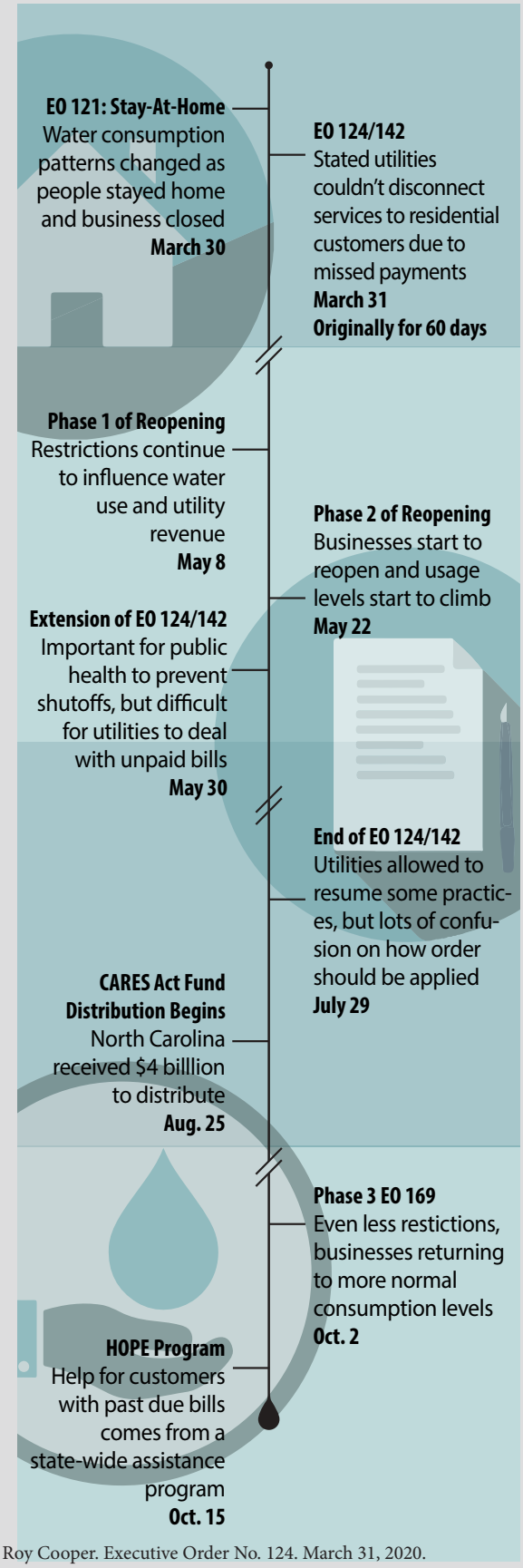
3. Roy Cooper. Executive Order No. 124.

water often require major investments. Much of NC's water infrastructure has exceeded its useful life, and systems require significant repairs and upgrades to improve resiliency against climate change and extreme weather events[4]. The need for infrastructure improvement is met with the question of how to pay for that investment. This pressure on NC municipalities is felt heavily by rural, economically distressed communities that already have some of the highest water and sewer rates in the state as economies of scale cannot be capitalized upon[5]. These towns often choose to delay much needed repairs and maintenance in order to meet day to day expenses, which carries a risk of more significant future costs if the system breaks down.

Customers who have difficulty paying the rates that will fund infrastructure investment often have a hard time finding assistance. As of 2020, the federal government provides regular financial assistance for food and electricity, but not for water. For example, NC receives nearly $1.7 billion in federal funding via the Supplemental Nutrition Assistance Program (SNAP)[5]. There is, however, no regular assistance for water utilities. Some emergency federal funding for utilities to cover extra cost has been provided through the CARES Act, which many utilities in North Carolina were able to receive. However, the need for ongoing support of utilities will extend well beyond any state of emergency brought on by the pandemic. There is an ongoing need to provide financial assistance in both the short and long-term timeframes to combat mounting infrastructure challenges and maintain effective water and wastewater services. In 2020, North Carolina legislators recognized this need and created a much-needed Viable Utilities Reserve, which is being used to address some of these needs[7]. However, only $9 million in non-recurring funds were provided. Additional, recurring funds will be needed to continue to address these needs.

4. North Carolina's Statewide Water and Wastewater Infrastructure Plan- The Road to Viability. 2017.
5. Walton, Brett. Aging Sewer System Imperils North Carolina Town's Finances.
6. Supplemental Nutrition Assistance Program. https://www.fns.usda.gov/news-item/usda-022020.
7. Viable Utility Reserve, North Carolina State Legislature. July 1, 2020. Session Law 2020-79. House Bill 1087.

Timeline of Events



On March 30th, Executive Order 121 went into effect[8], which required residents of North Carolina to stay at home, except for essential activities. This had an immediate effect on water consumption patterns as well as operations at utilities. Then, on March 31st, 2020, Governor Cooper issued Executive Order (EO) 124 to prevent utilities from disconnecting water/wastewater services to residential customers due to missed payments[3]. The moratorium was enacted to last for 60 days but was then extended until July 29th with the passing of EO 142 on May 30th. These Executive Orders prohibited all utility providers of end-user electric, gas, and water and wastewater services from disconnecting delinquent customers as well as collecting fees, penalties, interest, or other charges on late payments. It should be noted that EO 124/142 only applied to residential customers, with none of the mandates applied to commercial, industrial, or agricultural customers. In addition to requiring a prohibition on shut offs and late fees, the EO required utilities to issue at least 6-month payment plans for customers to pay off the bills accrued during the EO. When the EO expired on July 29th, 2020 there was a lot of confusion about when shut-offs could happen again, under what circumstances a utility could disconnect a customer, and what the requirements were for payment plans. The Attorney General's office, which was responsible for enforcing EO 124/142, did not provide guidance on payment plans until July 30th[9], which forced confused utility staff to quickly decide what how to provide payment plans.

For example, the Attorney General's office did not provide guidance on whether a local government could disqualify a resident from initiating a payment plan if they failed to sign up for the plan by the specified deadline, which is commonly done by utilities setting up payment plans. It is unclear whether this requirement is consistent with the EO 124/142 mandate, or whether customers may start the repayment process anytime within the minimum payment period allotted by the utility. Ambiguities such as these caused confusion among local governments and customers across the state and led to a wide variety of policies being enacted across utilities.

3. Roy Cooper. Executive Order No. 124. March 31, 2020.
8. Roy Cooper. Executive Order No. 121. March 30, 2020.
9. State of North Carolina, Guidance on utilities customer repayment plans. July 30, 2020.

Utilities where the EFC gathered information

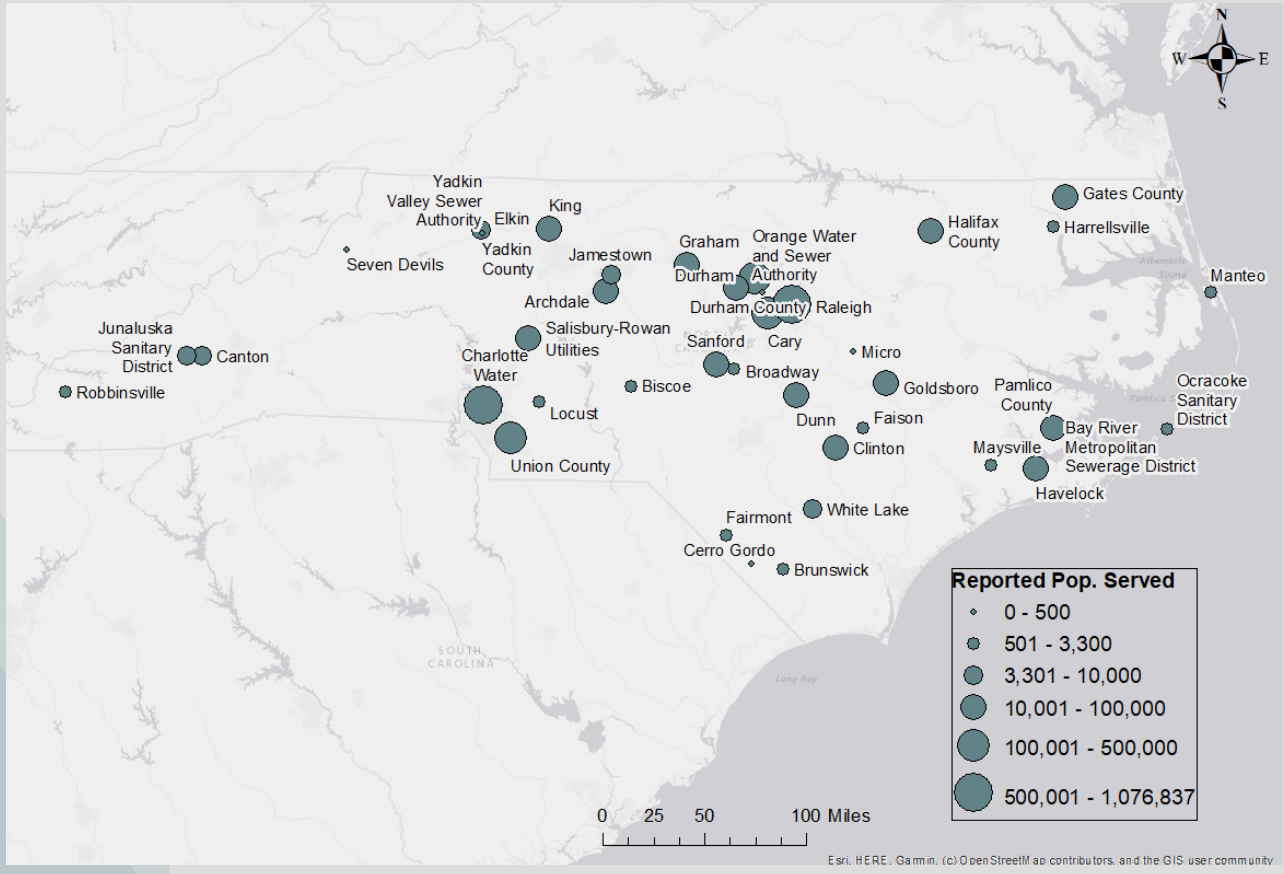
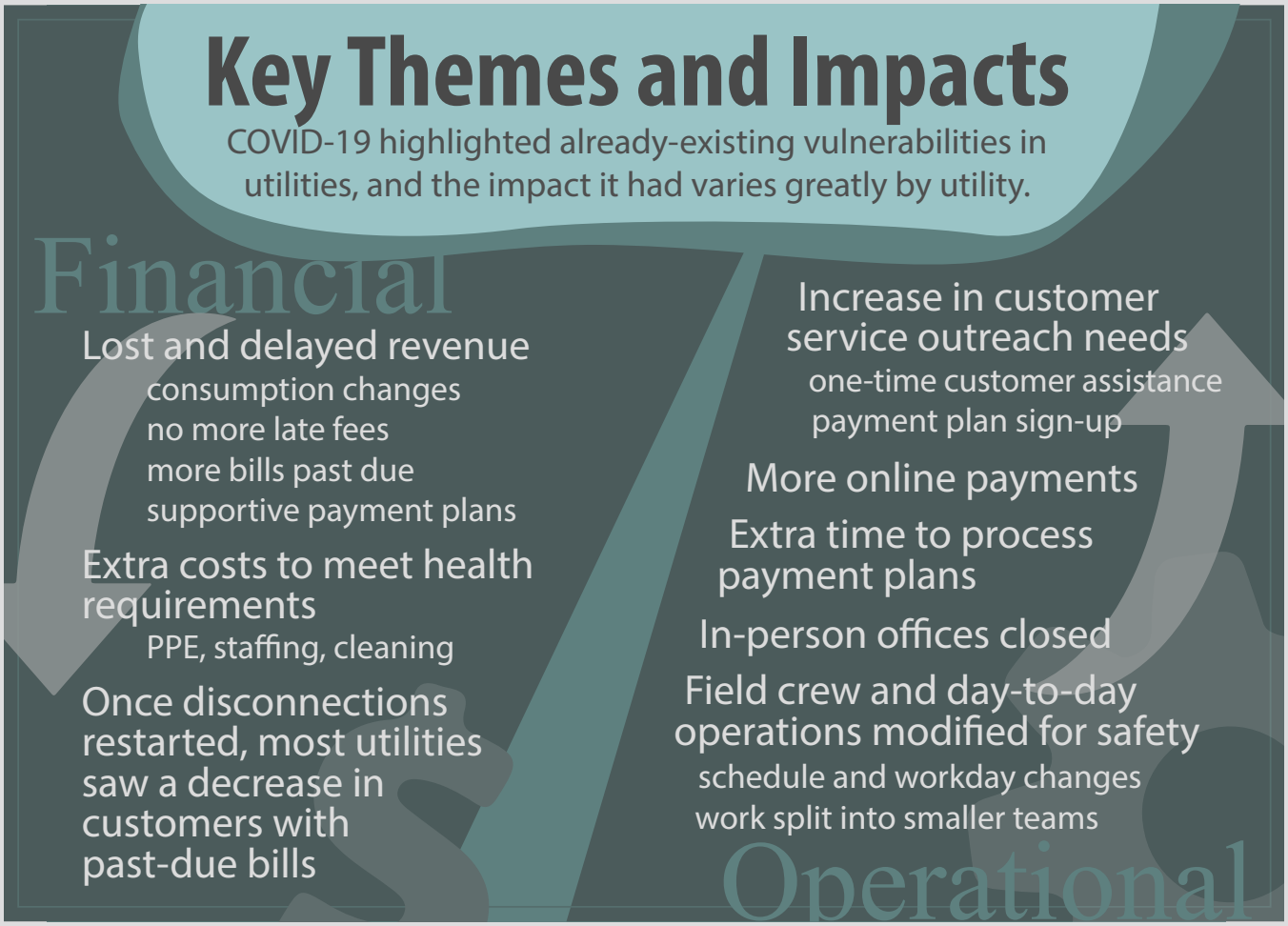


Figure 1. Map of utilities that provided inforation via survey reponse, interview, or email correspondence

For this study, the EFC gathered information about the impacts of COVID-19 on utilities across North Carolina, which includes impacts from the actual virus and public health measures well as from EO 121 (Stay at Home order) and EO 124/142 (moratorium on disconnections). Thirty-four (34) utilities responded at least once to an online survey regarding bills (and accounts) that were past due between the months of August through November 2020, and EFC staff interviewed staff from 16 utilities for more in-depth qualitative and quantitative information (see Figure 1). Additionally, for the quantitative analysis, the EFC used data collected by the North Carolina Utilities Commission[10] regarding bills (and account) past due, as well as other information, in the months of April-July.

For more information on the survey method and data collected, see Appendix A.

10. North Carolina Utilities Commission. Docket M-100 Sub 158.



Operational Impacts

With the start of EO 121 on March 30, 2020, many utility offices closed, and some remain closed at the time of this report. While service counters were closed at some utilities, customers could still make in-person payments through drop boxes[11,12,13] or a drive thru[13,14,15]. Although no utilities reported adding a new payment method solely because of COVID-19, utility staff have remained flexible to accommodate changes in collections through such methods as accepting cash in a drop box and checking it more often[11] or encouraging payments at local grocery stores (In the City of Sanford, payments made at stores have increased by 300% between January and August 2020). Utilities that already expanded options for payment saw an increase in the use of online billing (even from 40% to 75% for Halifax County Public Utilities), while some who did not have online billing saw an increase in email billing[15]. Others waived credit card convenience fees to encourage online payment[14,18]. Other utilities are considering even more payment options, such as Venmo, GooglePay, and PayPal[16].

11. Interview with Elizabeth Buffaloe (Administrative Officer) of the Halifax County Public Utilities, November 18, 2020
12. Interview with Sharen Apple (Accounting Manager) Town of Jamestown, October 15, 2020
13. Interview with Shannon Moore (Finance Director) at City of Salisbury, October 23, 2020
14. Interview with Susan O'Brien (Director of Finance and Personnel), City of King, August 19, 2020
15. Interview with Hillary Gropp (Town Clerk), Town of Seven Devils, October 28, 2020
16. Conversations with Gregory Jenkins (Revenue Manager), Town of Cary, July-December 2020
17. Interview and emails with Dave Johnson (Assistant Executive Director), Yadkin Valley Sewer Authority, July-December 2020
18. Interview with James Ayers (Town Manager), Town of Manteo, August 13, 2020

There were also large impacts to the field operations of utilities, which ranged from operating with split crews or rotating staff[14, 17] to implementing temperature check procedures, adjusting vehicle procedures, and changing schedules to perform more disconnections. While deep investigation into operational impacts due to COVID and EO 124/142 was outside the scope of this project, these changes have financial impacts on utilities as costs of personal protective equipment (PPE), overtime and/or hazard pay, and extra fuel or vehicles necessary to accommodate these changes can be significant. Some of these costs are eligible for reimbursement with CARES Act funding, if it is available to utilities while other costs, such as deferred maintenance, won't be realized for some time.

Revenue/Financial Impacts

Lost Revenue

Many utilities have seen a change in consumption patterns, and hence a change in revenue, because of the EO 121 (Stay at Home Order) and the implications of COVID-19. Any revenue lost because of a change in consumption patterns cannot be regained by utilities, and effects of consumption differences varied greatly between utilities.

For small utilities who depend on a large customer or industry for a significant amount of revenue, financial stability was affected by whether or not the large customer shut down. In the case of Yadkin Valley Sewer Authority, the temporary closure of a large industrial customer resulted in a 30% decrease in revenue during that time (see case study in Appendix B). In the case of Salisbury-Rowan Utilities, their largest customer, a large industrial plant, kept running and they noticed only a slight decrease in consumption. Some utilities that are not greatly dependent on one customer still saw significant decreases in usage. For example, the Town of Manteo saw a 95% decrease in institutional usage and a 25% decrease in commercial usage in May 2020 as compared to May 2019. For municipalities that depend heavily on tourism for their revenue, the Governor's Stay at Home Order and Phase 1 restrictions greatly decreased revenue. However, since Phase 2 started around the time tourist season would normally accelerate (May 22nd), they didn't see the same large decreases in consumption and revenue when averaging over the entire summer/early fall[16,17,18].

14. Interview with Susan O'Brien (Director of Finance and Personnel), City of King, August 19, 2020
16. Conversations with Gregory Jenkins (Revenue Manager), Town of Cary, July-December 2020
17. Interview and emails with Dave Johnson (Assistant Executive Director), Yadkin Valley Sewer Authority, July-December 2020
18. Interview with James Ayers (Town Manager), Town of Manteo, August 13, 2020
19. Email correspondence with Janie Garrish (Office Manager), Ocracoke Sanitary District, October 2020
20. Interview with Brenda Clark (Administrative Services Director), Town of White Lake, October 8, 2020

On the other hand, many utilities saw little or no change in overall usage or noticed an increase in residential usage that made up for decreases in commercial or institutional usage. Towns that have high residential populations, such as the Town of Cary or the Town of Jamestown, saw an increase in usage in the initial months of the pandemic. Other utilities serve universities or public schools that greatly decreased usage but were able to make up some of the resulting revenue losses through increased residential customer usage[21,22]. However, a utility serving only the institution (e.g., school or government building) but not the entire population of people who typically use such a building (e.g., students and staff), experienced a decrease in usage that was not mitigated by an increase on the residential side[23]. This is more likely to happen in a small town that serves only a portion of the residents of the larger area who learn or work in the town, such as in Biscoe, where schools can make up to 10-15% of revenue.

Although COVID-impacted consumption patterns have stabilized in some areas (many industries and restaurants are back open), other utilities are still losing consumption revenue from decreased usage in the commercial and institutional sector and must plan for the possibility of losing even more revenue due to an outbreak in the staff of a big water user or another state-wide shut down.

Another source of revenue that utilities lost and will not regain is late fees. EO 124/142 prohibited the charging of late fees on bills that became past due between March 31st and July 29th 2020. For some utilities, this amounted to losses of 0.5% to more than 5% of total annual operating revenue as reported to the NCUC[1] pg 20). However, while it was significant that some utilities were not able to collect late fees, that number would likely have been much lower if EO 124/142 was not in place. Many customers who had past due bills in April-July chose not to pay and thought they would never need to pay those bills or that more assistance would come, however, as soon as EO 124/142 ended and disconnections resumed at their utility, many customers came and paid off their balances[11,12,13,24](See Figure 2). Since there were a large amount of bills past due, utilities were unable to charge many late fees. However, some of these "lost" late fees are artificially inflated as customers who could pay, and would have paid absent a moratorium, did not until the threat of late fees prompted them to pay in full. Therefore, the

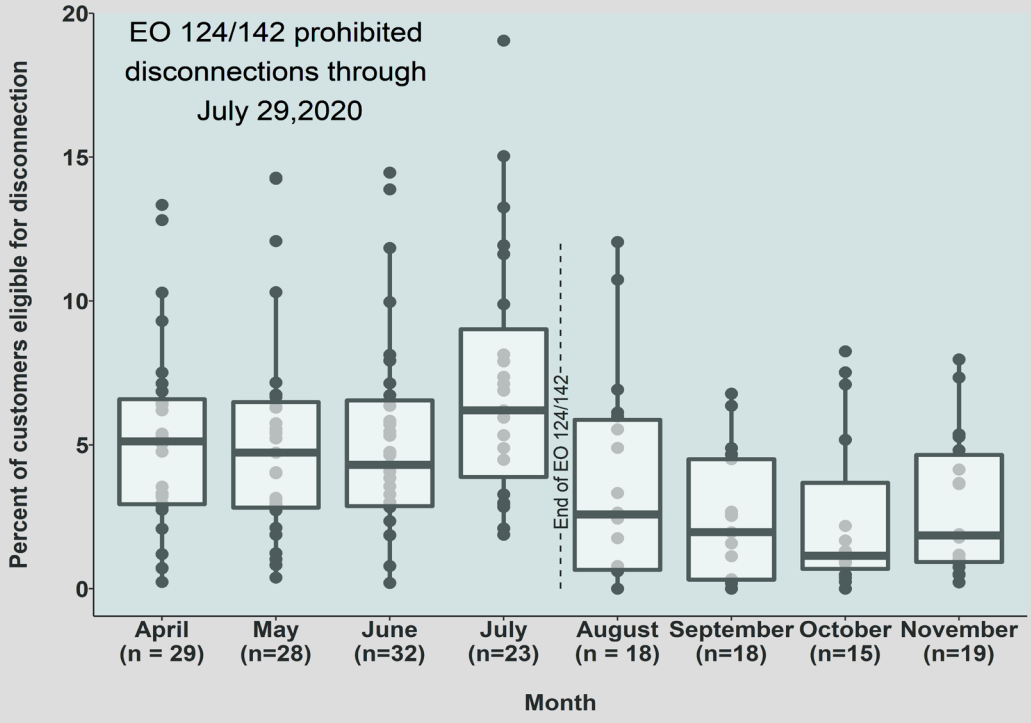
1. "COVID-19 and North Carolina Utilities", EFC at UNC, August 26, 2020
11. Interview with Elizabeth Buffaloe (Administrative Officer) of the Halifax County Public Utilities, November 18, 2020
12. Interview with Sharen Apple (Accounting Manager) Town of Jamestown, October 15, 2020
13. Interview with Shannon Moore (Finance Director) at City of Salisbury, October 23, 2020
21. Conversations with Jennifer Alford (Fiscal Manager), Raleigh Water, July-December 2020
22. Conversations with Thurman Chad Howell (Chief Financial Officer), Charlotte Water, July-December 2020
24.Interview with Michelle Ballard (Customer Services Manager), City of Sanford, October 30, 2020

actual lost fees are the difference between what a utility normally collects, and the late fees lost after EO 124/142 expired and customers paid in full.

Delayed Revenue

In addition to losing revenue due to changes in consumption patterns and uncollectable late fees, utilities are experiencing delayed revenue as customers sign up for payment plans and pay off balances (or not) in the months since EO 124/142 expired. With the expiration of EO 124/142, many utilities reported a decrease in customers with past due bills. Several noted that many of the customers who had outstanding bills at the end of the Executive Order had forgotten about their bills, thought that they weren't going to have to pay at all, or hoped there might be other assistance coming to help them pay[11,12,22]. Similarly, many utilities (though not all) reported a decrease in the number of customers eligible for disconnection after the EO ended (Figure 2). Since many utilities received a portion of the payments on bills right after the EO ended, the delay in those payments extended just into the next fiscal year. However, utilities that have a large portion of customers on extended payment plans may not receive much of that revenue until

Figure 2. Percent of customers eligible for disconnection



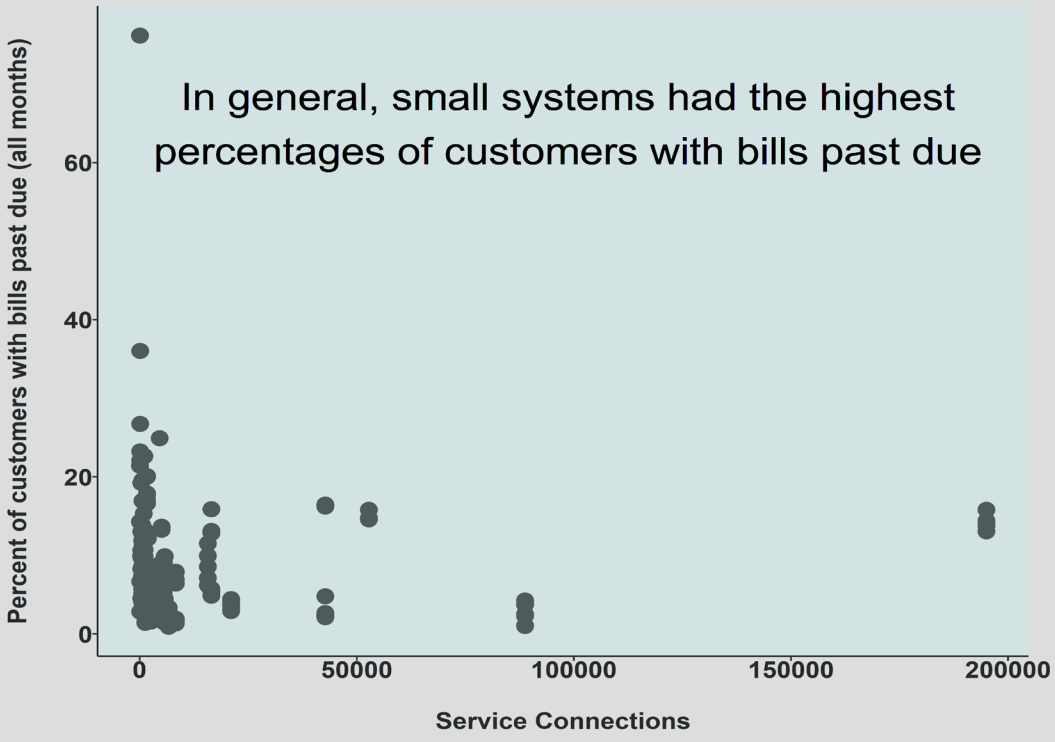
After EO 124/142 ended, the percentage of customers eligible for disconnection decreased from August to October and slightly increased in November.

11. Interview with Elizabeth Buffaloe (Administrative Officer) of the Halifax County Public Utilities, November 18, 2020
12. Interview with Sharen Apple (Accounting Manager) Town of Jamestown, October 15, 2020
22. Conversations with Thurman Chad Howell (Chief Financial Officer), Charlotte Water, July-December 2020

August/Sept of 2021. An added complication is that utilities that charge customers for solid water, recycling, or stormwater fees on their water/wastewater bills must provide the payments to the other services before applying payments to the water/wastewater fund[16,21,22].

As with all the impacts of COVID-19, the number of customers with bills past due or eligible for disconnection varies greatly by utility. However, the utilities with the highest percentage of customers will bills past due tended to be smaller utilities (Figure 3). In one case, a utility reported 31 of 42 (76%) accounts past due in July; at another utility 31 of 86 (36%) accounts were past due in September. This can greatly affect the ability of a small utility to pay their bills and provide continuous and quality service. At a larger utility, the impact of customers who cannot pay their bills is spread over a larger customer service area and the budget is not as impacted by customers who cannot pay.

Figure 3. Service connection and delinquent customers



The percent of customers with bills past due and number of service connections.

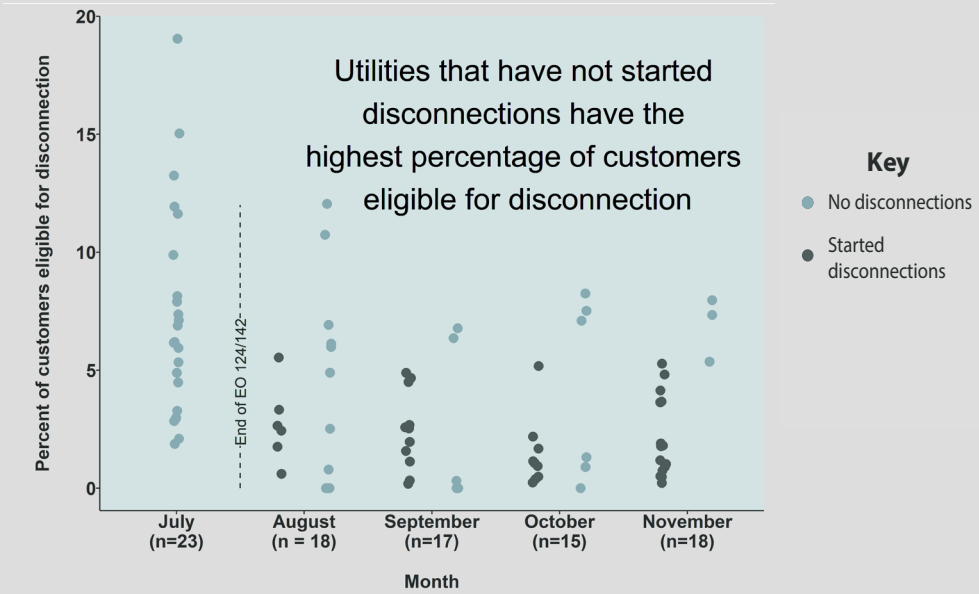
16. Conversations with Gregory Jenkins (Revenue Manager), Town of Cary, July-December 2020
21. Conversations with Jennifer Alford (Fiscal Manager), City of Raleigh Public Utilities, July-December 2020
22. Conversations with Thurman Chad Howell (Chief Financial Officer), Charlotte Water, July-December 2020

Disconnections due to Non-Payment: Impact of EO 124/142 and its expiration

In the months following the expiration of EO 124/142, many utilities resumed normal billing practices, which often includes disconnecting customers for non-payment. As mentioned, when disconnections started at a utility, some customers were able to come in and pay off their bills entirely. For each utility, the percentage of customers that are past due or eligible for disconnection is influenced by whether the utility has restarted disconnections.

Figure 4 shows the percent of customers eligible for disconnection with the darker dots representing utilities who have started disconnections, which are generally lower than the lighter dots, which represent data from utilities who have not yet started disconnections. This is not surprising as utilities increase communications with customers and provide incentive for payment when they start the process of disconnecting customers. In some cases, utilities see disconnections as a method to get the customer's attention and help them initiate a payment plan or find some other form of assistance. Staff from Salisbury-Rowan Utilities mentioned they started disconnecting customers to help them get on payment plans, to reduce the amount of past due bills they would need to pay to get reconnected, to help customers use CARES Act money to pay bills before December 31st, and to prevent a large influx of customers to the local non-profit simultaneously at the end of the year. Other utility staff also mentioned the need for revenue, as

Figure 4. Disconnections and percent elegible for disconnections

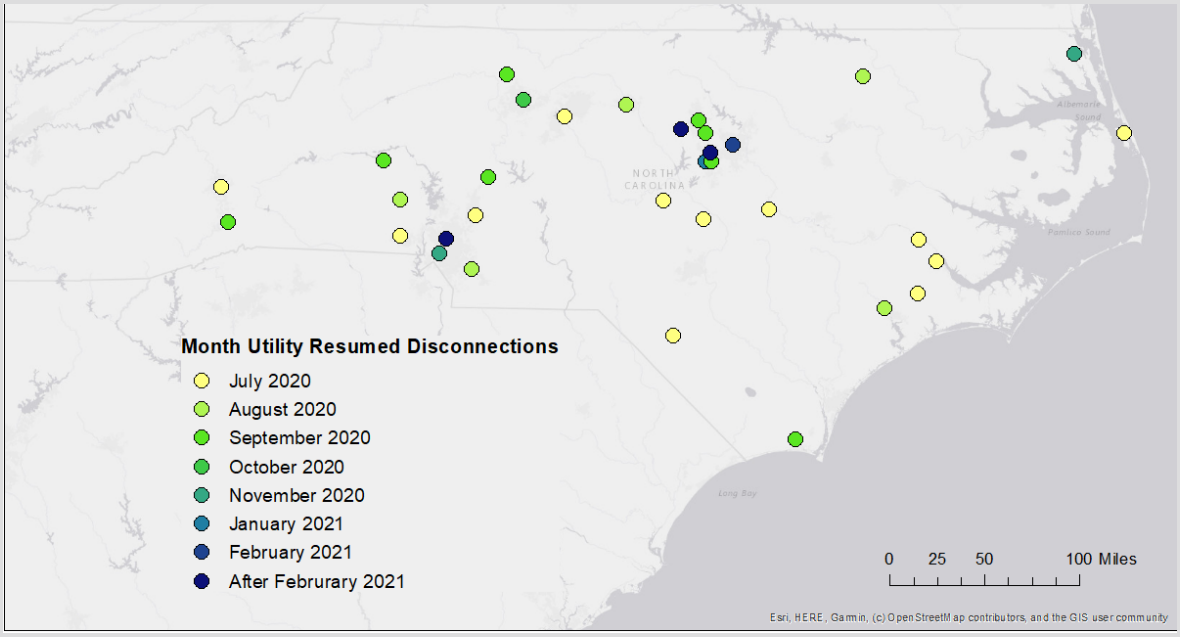


The utilities with the hightest number of customers eligible for disconnection had not yet started disconnections.

well as desire to help customers take care of their past bills (either through a payment plan or by pointing them to a third party that could provide one-time assistance) before they grew too large to pay.

Many utility staff mentioned wanting to be as lenient as possible before they disconnected any customers for non-payment. Staff at the Town of Cary explained that if a customer calls and pays any amount on their payment plan (regardless of how much of a current or past bill they paid), then they would be considered in good standing on their payment plan and not disconnected. There are many factors that have gone into each utility deciding when to disconnect customers (or not), and these decisions are still being made as the pandemic continues. For example, Cape Fear Public Utility was going to start a pilot program to use flow reducers to encourage payment in January, but the board has voted to delay that (and therefore prevent any disruption to normal water service) until March 1st. Across the state North Carolina, there is a wide range of dates when disconnections are restarting. Figure 5 shows when public and private utilities that serve 50% of the state's population will resume typical disconnection practice as of December 31st, 2020.

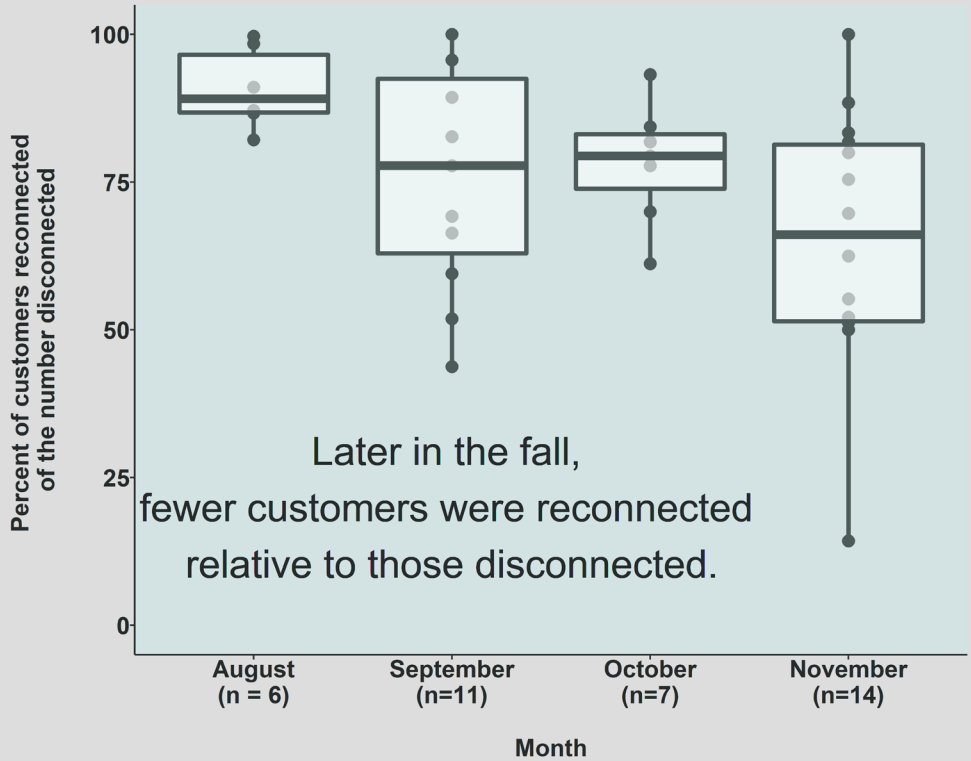
FIgure 5. Month that water disconnections resumed for NC utility customers



Utilities that serve 50% of the state's poplution have started or will begin disconnections from July 2020 to after February 2021

Utilities who have started to disconnect customers have had to increase communication and staff time to perform the disconnections and subsequent reconnections when customers pay. For utilities that reported disconnecting customers in September 2020, there were a similar number of reconnections that occurred relative to the number of disconnections (Figure 6). However, later in the fall, there was a greater range of reconnected customers relative to those disconnected, and the median was lower than in August 2020. This may indicate that most of the customers disconnected in August (right after EO 124/142 ended) were able to pay past due bills or enroll in a payment plan and get reconnected. However, fewer customers may be able to pay immediately and get reconnected, or the payment plan terms may become less flexible in the coming months as balances for past due bills might be higher and utilities begin transitioning back to typical billing practices. For customers on payment plans but not able make payments on current or past due bills, their bill continues to climb. For utilities who suspended disconnections until 2021, there may be customers with very large bills that have little chance of making payments sufficient to continue their water service when disconnections restart.

Figure 6. Disconnections/reconnections



The number of customers that were reconnected divided by the number of customers that were disconnected at 23 utilities that reported disconnections and reconnections in the EFC survey from August-November.

Payment Plans

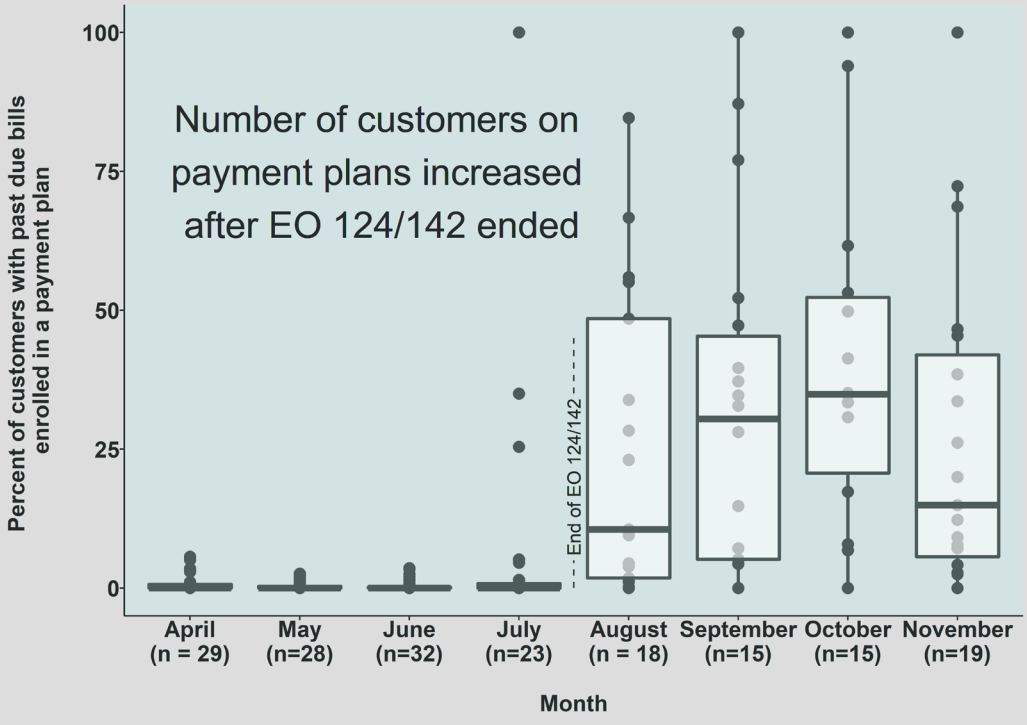
Although disconnections have started at some utilities, all the utilities from which data were collected also have some form of payment plan to help customers spread the payment of bills accumulated from March-July 2020 over a 6 month period (or more), as per EO 124/142. Payment plans make payments more manageable for customers, but also delay revenue for utilities over the same time period. Some utilities chose to offer payment plans longer than 6 months (Halifax County Public Utilities chose 9 months; the Town of Seven Devils, Town of Cary, and Charlotte Water chose 12 months), and some calculate payment plan lengths based on the amount that is due[24] or on specific communication with the customer[19]. While many utilities were glad to offer payment plans, a key theme is that administering these plans is very time intensive for customer service and billing staff. From April-July 2020, there were very few customers on payment plans, and when EO 124/142 ended, enrollment increased greatly (Figure 8), which meant more communication and administrative work for utility office staff. It was difficult to get customers to proactively sign up for payment plans[21], and some utilities either automatically enrolled them[16,22], or contacted each customer with a bill that was past due[18,25].

Many utility staff have needed to manually calculate payment plan payments, as billing software might not have this capability, or it is so complicated to use that staff choose to do it manually[11,13,25]. Some staff calculate payments outside of the billing software with a separate spreadsheet so they can keep track of which payments should be applied to a payment plan versus a current bill, as many billing software systems are programmed to apply payments towards the oldest available bill[11,13]. Between contacting individuals to enroll them on a payment plan[13,18,20,25] and processing payment plan calculations, many utilities needed extra staff time[13,16,21,22,25] to set up payment plans. Much of this work was done when payment plans started at utilities in August-October 2020, though ongoing calculations of payments will need to be completed each month.

11. Interview with Elizabeth Buffaloe (Administrative Officer) of the Halifax County Public Utilities, November 18, 2020
13. Interview with Shannon Moore (Finance Director) at City of Salisbury, October 23, 2020
16.Conversations with Gregory Jenkins (Revenue Manager), Town of Cary, July-December 2020
18. Interview with James Ayers (Town Manager), Town of Manteo, August 13, 2020
19. Email correspondence with Janie Garrish (Office Manager), Ocracoke Sanitary District, October 2020
20. Interview with Brenda Clark (Administrative Services Director), Town of White Lake, October 8, 2020
21. Conversations with Jennifer Alford (Fiscal Manager), City of Raleigh Public Utilities, July-December 2020
22. Conversations with Thurman Chad Howell (Chief Financial Officer), Charlotte Water, July-December 2020
24. Interview with Michelle Ballard (Customer Services Manager), City of Sanford, October 30, 2020
25. Interview with Sholathe' Gordan (Finance Officer/Town Clerk), Town of Maysville, September 17, 2020

Payment plans make it possible for many utilities to collect some of the past due bills from April-July 2020, but that revenue will be delayed -- for some utilities more than a year from when it was originally due. Other delayed revenue that will become apparent over a longer time scale is the delayed or foregone raise increases that might have been enacted in July (the start of the new fiscal year for many local governments and utilities). For some utilities planned rate raises continued despite COVID-19. Other utilities reported to the EFC that it was more difficult to raise rates because of COVID-19. For yet other utilities whose water and/or wastewater rates are determined by prices set by the wholesaler, rate raises are directly linked to whether the wholesaler increased their price or not[12,14]. While the impacts of a delayed (or not delayed) increase were probably not seen in 2020, future capital projects and fund balances may be affected by lower or delayed rate increases. Utilities rely on revenue from rate increases to help defray increasing construction costs, costs of inflation, and to repair aging infrastructure.

Figure 7. Payment plan enrollement



The number of customers enrolled in payment plans (and thus the effort to enroll cusotmers in payment plans) increased only after EO 124/142 expired.

12. Interview with Sharen Apple (Accounting Manager) Town of Jamestown, October 15, 2020
14. Interview with Susan O'Brien (Director of Finance and Personnel), City of King, August 19, 2020

Other Customer Assistance

Along with payment plans, water and wastewater utilities found a variety of other ways to offer assistance to customers who had large bills after EO 124/142 ended. Some utilities had a robust Customer Assistance Programs (which can include bill payment assistance) already in place, and others accelerated or initiated the process to create a CAP after COVID-19 started. Others, particularly small utilities, had more informal CAPs where other customers or local non-profits would offer to pay for customers who had past due bills. For example, one church in the Town of Jamestown called the utility staff and paid all the bills that were past due. In the City of Hendersonville, employees of the city paid off bills for residents. This assistance in the Town of Jamestown and the City of Hendersonville was prompted by the pandemic and EO 124/142, but other utilities have reported that customers will pay bills for others outside of pandemic conditions[19,26]. In yet other places, a town designated money from the general fund to help customers pay their past due bills[18].

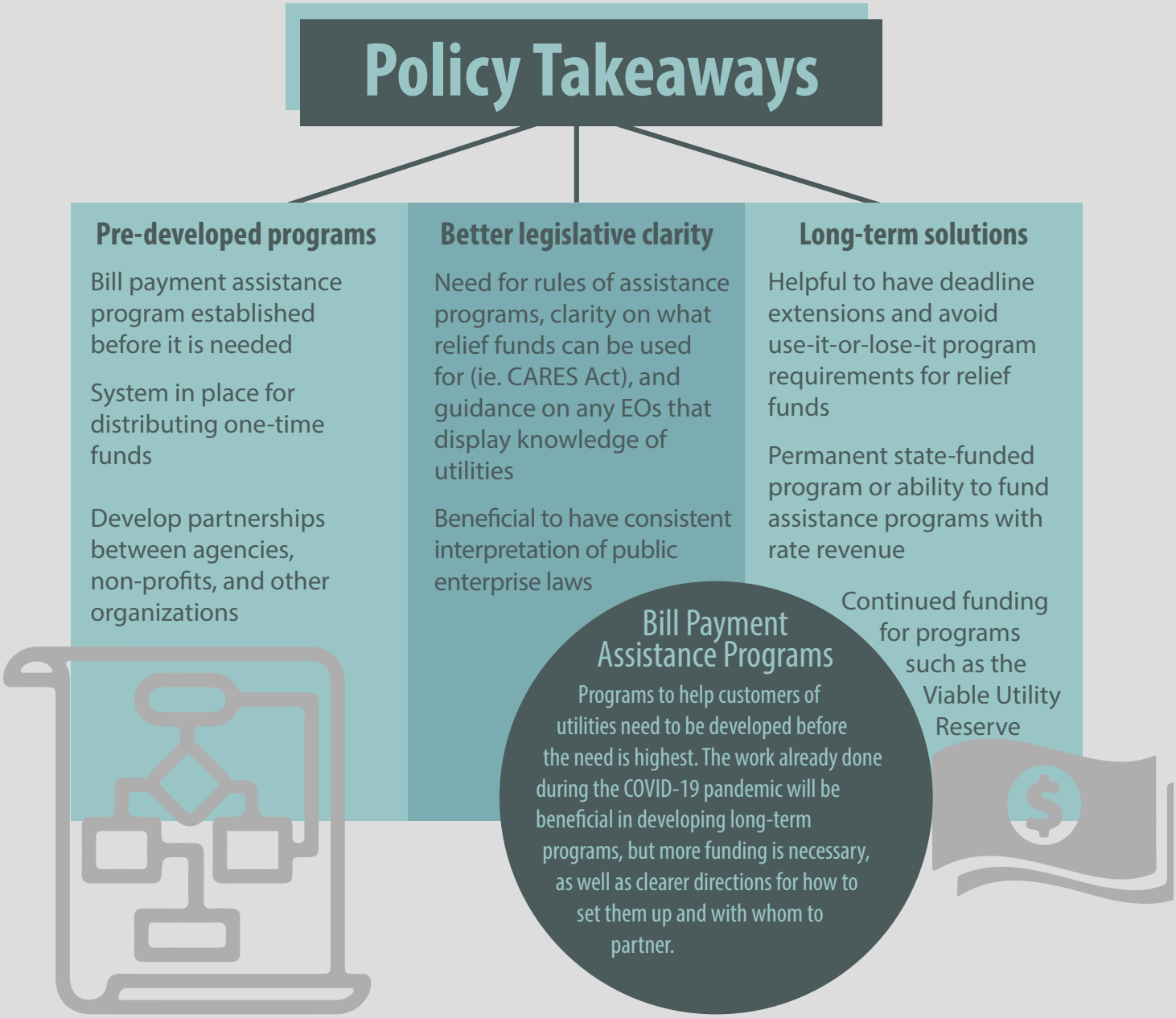
While helping customers pay their past due bills can be very beneficial for both the utility and the customer, there are also other types of assistance that can help a customer before their bills are even due. Utilities that consider affordability challenges while setting rate structures can create rate structures that make it easier for a customer who uses very little water to pay for very little water. Additionally, some utilities have programs that help customers conserve water (such as rebates for installing low-flow showerheads and toilets, helping to fix leaks, etc.), which may help prevent an unusually high bill. The COVID-19 pandemic has highlighted the importance of water for public health, which has increased the desire to find long term solutions to affordability issues and to ensure that as many customers as possible have water. Charlotte Water is increasing support for their call center and strengthening ties with non-profits. The City of Sanford has increased awareness of their CAP by releasing a video in July that explains the program, and donations increased to 10 times the previous monthly amount just 2 months after it was released[27]. Ongoing work is needed to continue these efforts beyond the pandemic.

18. Interview with James Ayers (Town Manager), Town of Manteo, August 13, 2020
19. Email correspondence with Janie Garrish (Office Manager), Ocracoke Sanitary District, October 2020
26. Email correspondence with Lara Feinberg (Office Administrator), Junaluska Sanitary District, December 9, 2020
27. "Sanford Cares" Video, https://sanfordnc.net/743/Sanford-Cares, accessed October 29, 2020

CARES Act Funds

Customer Assistance Programs can provide greatly needed relief to the customers at utilities who have a CAP, but they are often limited by the amount of donations received. Additionally, utilities need other funds to help with expenses related to the pandemic besides past due bills. CARES Act funds were distributed to counties in August 2020, and some local government utilities were able to use those funds for COVID-19 related costs such as personal protective equipment, laptops, cleaning supplies and other equipment[12,13,14,15,28]. The City of King used CARES act funding to reimburse themselves for paying convenience fees on credit card payments for their citizens starting in March 2020. Some towns and counties interpreted the CARES act funding guidance such that they did not allow CARES act funds to go towards helping customers will bills that were past due, but others did use CARES act money to help customers. Distribution varied by utility and non-profit in terms of who could receive funding (and how often) and how much funding a customer could receive. Interpretations and uses varied significantly by utility, municipality, and county, and in some cases, the ambiguity surrounding the use of CARES Act funding delayed assistance programs. The U.S. Treasury Department had issued guidance for state and local governments on how federal relief funds could be used and one of the restrictions stated was that the funds may not be used to backfill lost revenues[29]. Many utilities were able to get some CARES Act funding to help with the costs of the COVID-19 pandemic, but lost late fees, lost revenue because of decreased consumption, and delayed revenue due to payment plans and delayed rate increases will continue to impact utilities for many months to come.

12. Interview with Sharen Apple (Accounting Manager) Town of Jamestown, October 15, 2020
13. Interview with Shannon Moore (Finance Director) at City of Salisbury, October 23, 2020
14. Interview with Susan O'Brien (Director of Finance and Personnel), City of King, August 19, 2020
15. Interview with HilIary Gropp (Town Clerk), Town of Seven Devils, October 28, 2020
28. Interview and email correspondence with Laura Gordan, town of Biscoe Sept, Oct, Nov 2020
29. US Department of the Treasury - Coronavirus Relief Fund: Guidance for State, Territorial, Local, and Tribal Governments



Policy Takeaways

This research conducted by EFC for this report were narrowly focused on the COVID-19 pandemic and its specific impacts on the operations and finances of water sector utilities in North Carolina as they have continued to grapple with its effects. The lessons learned and policy takeaways from this research, however, underscore the need for a more resilient water sector in general. COVID-19 created a perfect storm which highlighted some very concerning vulnerabilities in the water sector for utilities and customers. The essential need to maintain water and wastewater services for all North Carolinians became more pronounced than ever, especially considering its public health

necessity, while simultaneously presenting financial challenges for a greater number of ratepayers due to rising unemployment and worsening economic conditions. In addition, COVID-19 made evident the need to have consistently high-functioning and fully operational water and wastewater utilities, despite new operational and financial obstacles. Figuring out how to meet both needs has proven challenging during the pandemic and some key lessons learned during this time will be critical for a more sustainable future for water sector utilities in the post-pandemic world. In fact, every year, water sector utilities in the state face many struggles and challenges, from hurricanes and flooding, to drought and water shortages, to population changes, and closing industries or other large businesses. When these events occur, systems can face interruptions in service, the need to have flexible operations, shut offs or other access issues, which all lead to negative impacts on the revenue and financial sustainability of the utility. To help mitigate the harms from these events, there are two types of support needed:

- Direct Customer Assistance: this could include actions such as avoiding shut offs for non-payments, providing bill payment assistance, or helping with repairs if there is significant damage to customer property

- Direct Assistance for Utilities and Local Governments: this could include helping utilities with revenue stability so that they can minimize interruptions in service and may also include things like helping with repairs if there is significant infrastructure damage.

There will likely always be a need for these types of reactive assistance and the state should consider the best ways to maintain resources to offer continued help through this type of assistance going forward. But the COVID-19 pandemic has brought to light opportunities to build a more resilient framework to help water sector utilities handle the next “storm” in a more proactive way. The four policy takeaways detailed on the following pages were identified through analysis of the data collected and summarized in this report and offer a starting point for this type of proactive approach.

1. The pipeline of providing financial relief to local governments and utility customers needs development prior to the emergency.

Financial relief is sometimes offered to local governments and/or the general population in the middle of, or immediately following, an emergency. During the COVID-19 pandemic, this reactive assistance occurred through various programs to support people, businesses, and local governments, such as through the CARES Act. While the financial relief is of great benefit to the recipients, administering and distributing large one-time funds during the emergency or immediately afterwards is very challenging without adequate infrastructure and programs already in place. With CARES Act funding, Counties were given the responsibility of administering the funds locally and different interpretations of what the funds could or should be used for resulted in the application of funds in different ways across the state. Agencies with varying degrees of practice administering or accessing relief funds have different experiences and outcomes in providing the funds to recipients. This can also be observed during the aftermath of a hurricane and a local government's ability to access federal relief funds quickly, given their previous experience and understanding of how to do so.

When tried and tested mechanisms are already in place to facilitate administration of financial relief to local governments and utility customers ahead of future emergencies, the funds can be distributed more rapidly and consistently. Much work in developing these mechanisms and pipelines was accomplished during these past few months and there is opportunity to build on these developments now ahead of future disasters. Partnerships between agencies, non-profits, and other organizations should be strengthened (or developed), staffed, and trained to be ready to administer future federal and state financial relief funds for various types of emergencies to local governments and to the general population (including utility customers). Administering agencies and organizations also need plans and financial resources to temporarily increase staffing to administer financial relief programs when funding is made available during or after an emergency, rather than relying on the third-party organizations to figure out how to administer those funds with limited resources when the need is highest. Temporary staffing can be provided by hiring temporary or seasonal workers, interns, volunteers, temporary re-assignment of local

government staff, or by any other means, as long as a recruitment and rapid training plan is already developed and can be implemented on short notice. The agencies and organizations tasked with administering financial relief programs will also need funding for staffing and communications.

Finally, the need for the financial relief can sometimes outlast the original estimation. For instance, while CARES Act relief funds were originally set to expire at the end of December 2020, the need for financial relief continues at the time of this report. Extensions to deadlines and avoiding use-it-or-lose-it program requirements would facilitate the provision of relief funds while the need continues.

2. Flexibility and prior knowledge are important in setting policies to address emergencies.

As shown in the analysis presented above, the COVID-19 pandemic affected individual utilities in very different ways. While some utilities lost a lot of revenue from closed businesses or faced greater challenges than others with collecting payments from customers, other utilities may have experienced an increase in water use and billed revenues or were able to rely on their reserves to offset losses. The pre-pandemic conditions and the utilities' unique customer base profiles and behaviors influenced the overall impact of the pandemic on each utility's operations and finances. With such a variety of impacts and conditions, no single statewide policy or program will be equally effective in addressing all the utilities' needs during an emergency.

EO 124/142 were designed to protect North Carolinians' public health and access to utilities during the pandemic and Orders were an important tool in protecting the population across the state. However, the impact of the Executive Orders affected utilities differently across the state, though the Orders required all utilities in the state to comply with the same requirements. These requirements included, among others, a prohibition on late fees and disconnections due to non-payments, monthly reporting of data, and the development of payment plans to address customers' payment needs. Some utilities were more financially sensitive than others to the loss of revenues from avoided late fees and from reduced payments due to the elimination of a collection enforcement mechanism (i.e. disconnections), particularly utilities that were limited in

their financial resources prior to the Executive Orders. Smaller utilities did not have the staffing resources – either in terms of number of staff with available time, or the necessary training and technological capabilities – that larger utilities had to collect, analyze and report the required data monthly. The requirement to develop payment plans that affected only the delinquencies on water and wastewater bills that accrued during the Executive Order period proved to be a significant challenge to many utilities in the state whose billing systems were not set up to implement payment plans as envisioned in the Executive Orders.

Prior knowledge of the capabilities of utilities and potential challenges and disparate impacts to the implementation of a statewide utility policy with uniform requirements to address an emergency are important to ensuring the policy's success. This knowledge could influence the requirements or might suggest the need for some flexibility in enforcement based on utility-specific conditions. This understanding can be achieved by connecting policymakers with agencies and organizations that work directly with utilities in the state and can advise on how potential policies might affect utilities differently (for a list of specific organizations, see Appendix C).

Furthermore, since the Executive Orders required the water and wastewater utilities to develop data collection and reporting mechanisms, at least temporarily, there is an opportunity to take advantage of these mechanisms to continue to collect data that would be beneficial for future policy-making purposes. Some of the data that utilities were required to collect and report would be important in developing assistance programs or policies to protect North Carolinians in general or during future emergencies, for example, data on the number of customers that are behind in paying their bills, the amounts of arrears, and the number of customers being disconnected for non-payment of bills. The data reporting frequency and agency tasked with collecting the data could be adjusted to facilitate the process going forward. This is indeed currently taking shape with Session Law 2020-3's requirement for local government utilities to report additional data to the Department of State Treasurer (rather than the North Carolina Utilities Commission) and at a less frequent period than under the Executive Orders[30]. Continuation of data collection past the requirements of Session Law 2020-3 should be examined

30. General Assembly of North Carolina. Session law 2020-3. Senate bill 704. Section 4.29(a).

for the purposes stated above. The availability of data would supplement the prior knowledge required to design statewide policies that are effective in both protecting customers and ensuring financial sustainability for utilities.

3. Support is needed to fund and develop bill payment assistance programs.

Bill payment assistance programs (which are one type of Customer Assistance Program) directly support customers who are connected to water or wastewater systems but are unable to pay for those services. Recipients of these funds avoid the consequence of non-payment, which typically results in disconnection from service. At the same time, the utility benefits from the funds distributed through these programs by receiving the revenues owed to them from customers that otherwise would not have been able to pay. There was greater interest – and greater need – in bill payment assistance programs this year as a result of COVID-19 and the associated policies that were designed to support the population in avoiding evictions and disconnections from utilities. However, the development and support of these programs on short notice faced challenges.

Utilities and local governments that did not already have assistance programs set up locally were at a disadvantage in understanding the applicable laws and setting up and seeding programs to distribute assistance. Local governments would benefit from clearer understanding of what is permissible in terms of funding bill payment assistance programs, how to set them up, and with whom to partner. The current interpretation of public enterprise laws seemingly would prohibit local government utilities from funding assistance programs from revenues generated by water and wastewater bills, although there is anecdotal evidence that enabling local governments to fund programs in this way would make it easier to set up programs that would help their lowest income or most affected customers afford their bills and stay connected to water and wastewater service. Currently, paying customers are subsidizing the lost revenue from bills that go unpaid, as well as any expenses associated with disconnecting and reconnecting customers, if those fees don't cover the cost. Clear guidance and support for Customer Assistance Programs, however they are funded, would help the utilities address longer term water and wastewater affordability concerns more directly while enabling them to charge the rates they need to support their long-term financial viability. Utilities and local

governments that already had active bill payment assistance programs were able to mobilize those resources to their customers and residents quickly, and both the utility and customers benefited from their existing setup.

Some utilities and local governments that did not have existing bill payment assistance programs depended on the availability of federal funds from the CARES Act to fund assistance programs. However, the Counties which were responsible for administering CARES Act funds had varying interpretations of whether those funds could or should be used to help pay for residents' utility bills even if they were affected by COVID-19. Consequently, the creation and funding of bill paying assistance programs using CARES Act funding was inconsistent across the state. With the introduction of a statewide program, administered by North Carolina Office of Recovery and Resiliency (NCORR), bill payment assistance was offered to rural communities, but the funding was limited and allocated quickly. Many people that needed the assistance might not have found out about these programs or might have applied too late or had to wait for long periods while a backlog of applications was processed. These examples demonstrate obstacles to administering bill payment assistance programs using federal funds at the time of emergencies: the funding is limited and temporary, communication about the programs does not reach all affected people in time, and the development and implementation of the programs is difficult and inconsistent across the state. Bill payment assistance programs, and other customer-centric assistance programs, require a significant amount of communication and outreach, which requires labor and time. Third party organizations, such as non-profits and charity organizations, can help address the communication and disbursement of emergency funds but need additional resources – money and time – to administer a sudden and temporary cash infusion during a time of emergency. Similar to the previous policy takeaway, to better prepare for future emergencies, bill payment assistance programs must be set up now, ahead of emergencies, and the administrators of the programs already staffed and trained, and information about the programs already shared widely among residents and customers.

There is still a need for assistance even after the allocated funds have been exhausted, as the need often does not expire at the end of the emergency. There is an appetite for a permanent state-funded program, or at least the ability to allow utilities and local governments to fund bill payment assistance

programs using their own water and wastewater revenues.

4. Supporting the longer-term viability of utilities enhances their resilience against future crises.

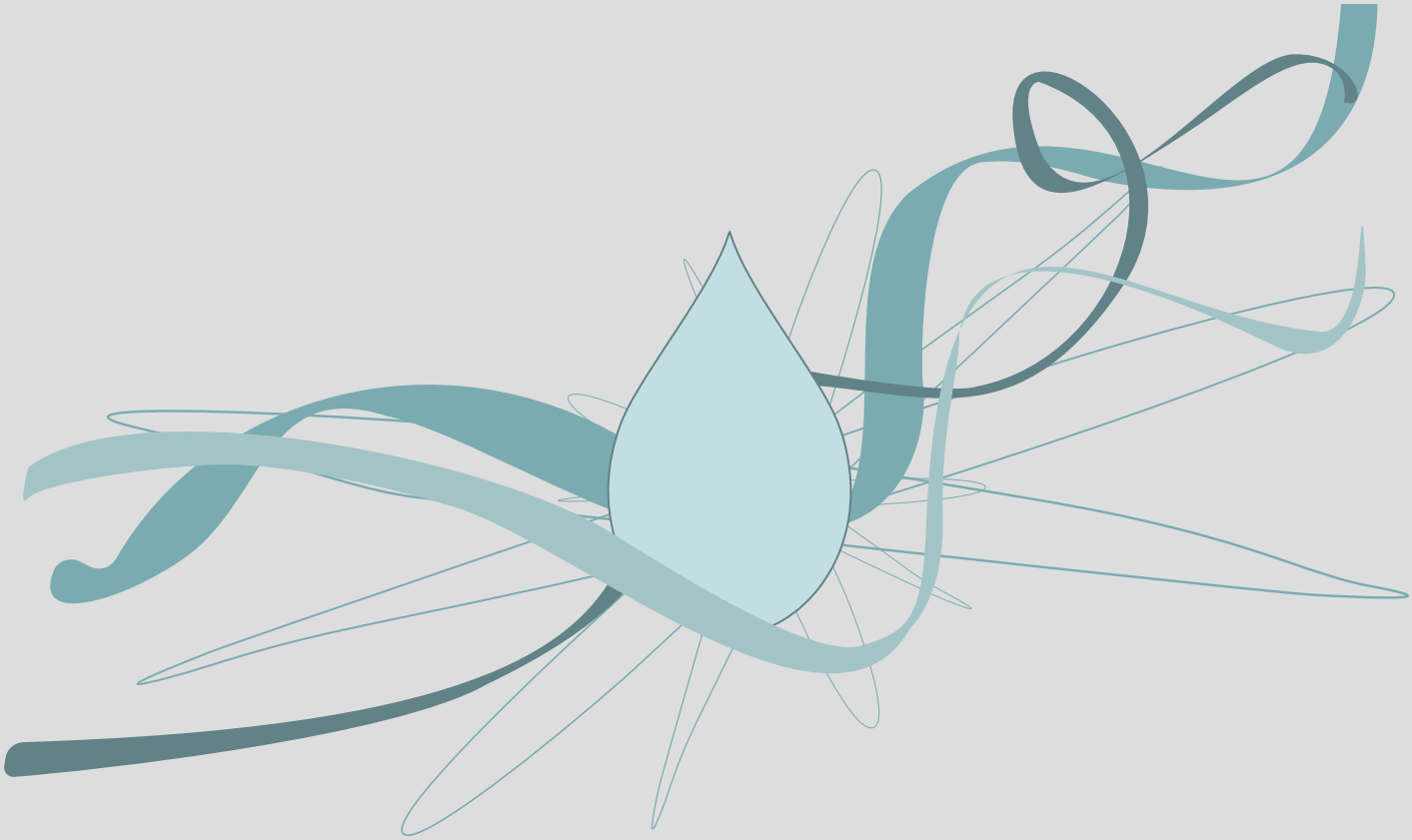
While state and federal support to local governments and utilities at a time of emergency is important, support for the viability of utilities to improve their resilience against future crises provides longer-term benefits and enhances their ability to address challenges locally.

As is captured in the data, some water and wastewater utilities struggled with revenue losses as a result of the COVID-19 pandemic as businesses closed and more customers couldn't pay their bills and may need financial relief to compensate for those losses. This relief would be a short-term solution to address an acute (and real) need among several utilities, until the next crisis occurs. In some cases, financial relief may be the only way to ensure that the utilities are able to continue to pay their expenses and provide services to their customers.

A more lasting solution would be to support utilities in improving their viability and resilience ahead of future crises. Generally, utilities that had a stronger financial condition ahead of the pandemic fared better than utilities that were already struggling financially and suffered revenue losses. Utilities with a healthy fund balance were able to continue disconnection moratoria after EO 124/142 expired, even into 2021. In particular, utilities with smaller customer bases have more limited financial resources than larger utilities, generally struggle more, and have tighter budgets on which revenue shocks can be detrimental. The COVID-19 pandemic has spotlighted this reality. Programs that support the long-term viability of utilities, particularly small utilities, could reduce the need for financial relief in future emergencies.

The State of North Carolina has already developed a few programs to support and improve the viability and resilience of water and wastewater utilities, such as the Viable Utility Reserve, the Asset Inventory and Assessment grants, the Merger/Regionalization Feasibility grants, and various state and federal subsidized capital funding programs for water and wastewater utilities. These programs are critical for the long-term viability and resilience of water and wastewater

utilities in North Carolina, particularly rural and smaller utilities, and are models for other states. Increasing the resources and funding made available to these programs would support more utilities and place them in better position to withstand emergencies on their own in the future. For example, the Viable Utility Reserve was created by the State legislature in July 2020 and provides a vital mechanism by which the state identifies utilities that are most distressed and some funding to attempt to permanently resolve their issues. In the first assessment of utilities under this program, more than 100 (nearly a quarter) of the local government utilities in the state were determined to be potentially "distressed" and eligible for assistance[31]. The initial funding for the Viable Utility Reserve is limited however: $9 million in non-recurring funds for one fiscal year, which can only help a very small number of utilities at this time. By comparison, water and wastewater utilities in North Carolina need around $17 - $26 billion in capital funding over twenty years simply to invest in and maintain their physical infrastructure to provide service (4). Continuing to support and increase funding for the Viable Utility Reserve along with the other important programs mentioned, would improve the viability and resilience of water and wastewater utilities in North Carolina for the long-term.



4. North Carolina's Statewide Water and Wastewater Infrastructure Plan- The Road to Viability.
31. SWIA December 9, 2020 Meeting Agenda Item G – Draft List of Distressed Units:

Looking to the Future

As 2021 begins, the COVID-19 pandemic is still greatly affecting utilities, their customers, and the entire state. Those impacts are, and will continue to be, specific to each utility and will change as local conditions change and state mandates expire or are created. The impacts included in this report (lost revenue due to changes in consumption, delayed revenue, payment plans, operational changes) will continue as the pandemic continues. However, since EO 124/142 has expired, utilities have been able to resume more typical billing and collections practices, though some have chosen to delay (see Fig. 5). The impact on customers as lengthy payment plans ends and large bills are due will be seen in 2021. As the year continues, some utilities will recover bills that were past due or understand what portion of bills past due that may be uncollectable. The effects of delayed revenue as well as delayed rate raises or capital improvement projects will be seen in the months and years to come, and as the pandemic continues, those effects may grow in intensity. Continued support for both utilities and their customers as pandemic conditions linger and as they end can ensure the delivery of vital public health services.

Continued support for both utilities and their customers as pandemic conditions linger and as they end can ensure the delivery of vital public health services. Even after this crisis is over, ongoing interest and support is needed for local utilities as challenges to providing safe, clean, and affordable water and wastewater services continue.

Utilities in COVID-19

Financial Impacts on Water and Wastewater Utilities in North Carolina*

Combating the COVID-19 pandemic requires clean, reliable water service. The critical public health role of water and wastewater systems means they must stay economically viable while serving customers who cannot pay.

Executive Order 124/142

The enactment & extension of EO 124 prevented utilities from disconnecting customers due to missed payments and required 6-month payment plans.

Revenue Losses and Delays

With consumption changes, a pause on late fees, more past-due bills, and payment plans, some utilities lost revenue.

Policy Takeaways

Develop programs and fund distribution methods before they are needed

Better clarity needed for CAPs, one-time orders, and funding rules

Flexible deadlines and continual funding of assistance programs

Assistance for customers and utilities

Payment Plans

Logistically challenging
Time-intensive for staff
Billing software inadequate or difficult
Type and duration vary by city/utility
Difficult to get consumers to register
- Communication is challenging

Revenue is delayed for utilities

Customer Assistance Programs

Some cities already had programs (formal and informal), and others started or accelerated their development during COVID-19
Can be helpful, but utilities still need financial help and legal guidance to assist customers with past-due bills

CARES Money

Good for PPE, cleaning supplies, operations
Unclear if it could help customers with past-due bills
- Interpretation / use varied greatly

Ambiguity caused some delayed assistance programs

Building Resilient Framework

Supporting the longer-term viability of utilities and pre-developing some pipelines for financial relief helps utilities' resilience against future crises.

Looking to the Future

The effects of the pandemic are ongoing and operations are still affected. There is more financial assistance coming, but it remains unknown how utility revenue will be affected in months to come.

UNC SCHOOL OF GOVERNMENT
Environmental Finance Center

*all information gathered from March-Dec 2020

Appendix A: Survey Method and Data Considerations

The EFC sent out a survey every month to the UNC-CH School of Government-administered listservs for water and wastewater utilities and for local government finance officers. Staff from 34 utilities responded at least once from August to November. EFC staff verified information that seemed incorrect by emailing respondents and confirming or modifying responses. The questions in the survey are listed below:

Contact information

Total number of active accounts that were considered past due or delinquent on the last day of the month:

Total dollar amount of payments past due as of the last day of the month:

Total number of accounts enrolled in payment plans on the last day of the reporting month:

Total balance remaining on all repayment plans on the last day of the reporting month:

Total number of accounts enrolled in a repayment plan that are up to date on their payments (in good standing) on the last day of the reporting month:

Total number of accounts that became eligible for disconnection due to non-payment during the reporting month:

Total number of accounts that were disconnected because of non-payment during reporting month:

Total number of accounts that were reconnected after being disconnected for non-payment during the reporting month:

Data considerations: Although a wide range of utilities responded to the EFC's online survey, responses only reflected a sub-set of utilities across the state of North Carolina. The sample size varied from month-to-month, as some utilities only responded once or twice and others responded each month. Additionally, only the staff who are connected to the listserv or heard about the survey during a presentation could respond, and those needed to have the time to do so.

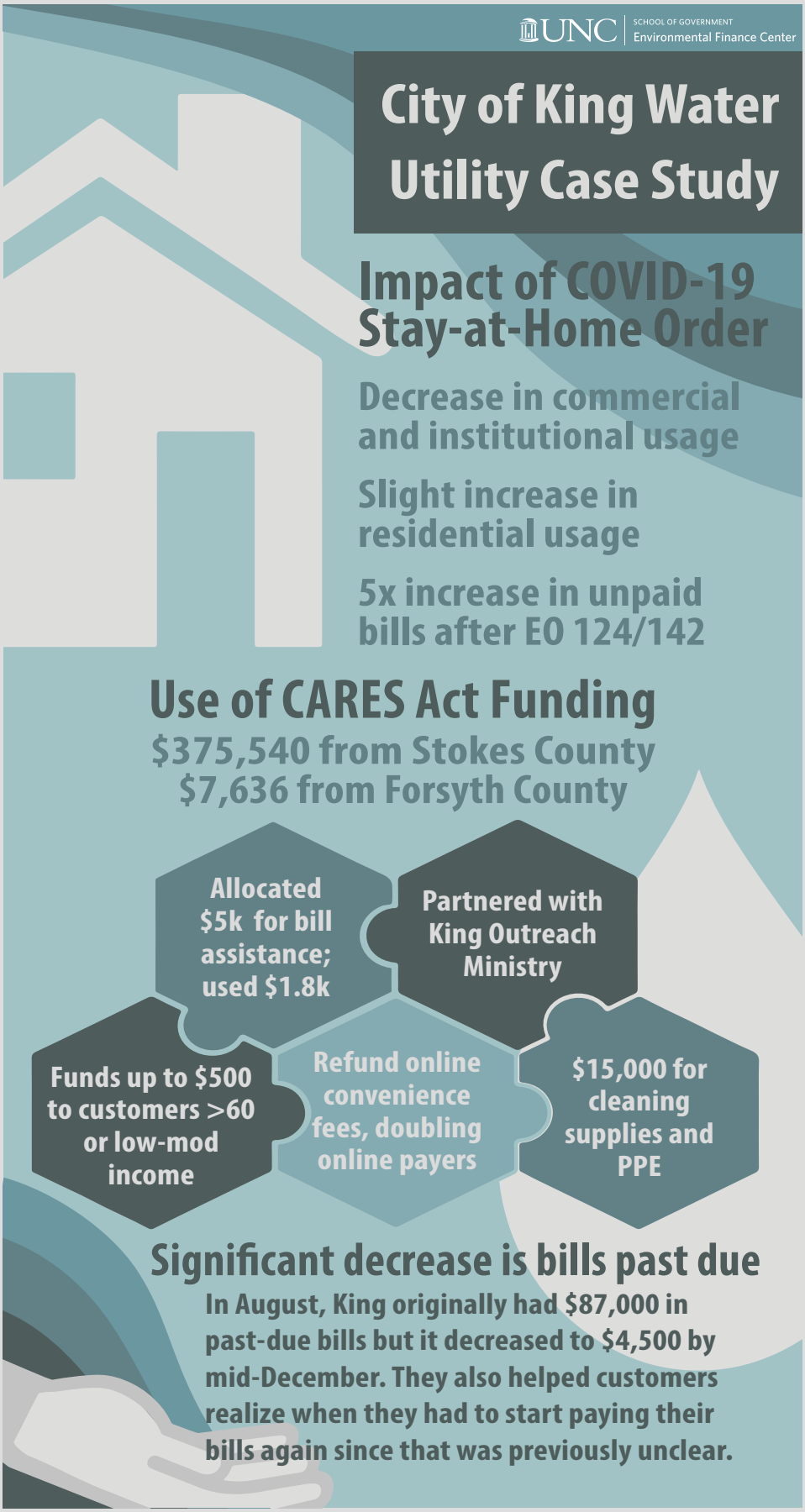
The survey was brief to encourage consistent reporting from busy utility staff. This means there are some gaps, such as more detailed information on the customers who had past due bills (e.g. residential vs. non-residential) or billing practices. Additionally, utilities often have different billing cycles, so not all respondents could report numbers for the end of month but rather reported for the end of the week closest to the last day of the month. Utilities can also count accounts differently. For example, does a utility count each customer who has both a water and sewer account as 2 accounts, or just 1 account? Additionally, a utility may not be able to evaluate how much money was paid on past due bills instead of current bills because of limitations with their billing system. For this report, reported numbers were compared to total number of accounts for each utility to get the percentage of accounts past due and percentage of accounts eligible for disconnection.

In addition to the online survey, EFC staff contacted and interviewed staff from at least 16 utilities of a variety of locations and sizes across the state to gather qualitative information regarding the impacts of COVID-19. Utility staff were asked about operational impacts, payment plans, customer assistance programs, the use of CARES Act money, number of customers past due, and how EO 124/142 affected them.

Appendix B: Case Studies
Yadkin Valley Sewer Authority

Here is the link to the full case study description, as posted on the EFC's blog.

Appendix B: Case Studies
The City of King



Appendix B: The City of King Case Study

The City of King is a city of about 6900 people, located 15 miles northwest of Winston-Salem and on the border of Stokes and Forsyth counties. The water system, which treats water from the Yadkin River, services 4 of the surrounding towns in addition to the City of King and provides clean drinking water to over 20,000 customers. The City of King processes billing for water and wastewater, though the treatment of wastewater is provided by the Winston-Salem/Forsyth County Utilities.

Since the Stay-at-Home order in March, the City of King has seen a decrease in commercial and institutional (one school's and the YMCA) usage, but only a slight increase in residential usage that has not compensated for the decrease in commercial and institutional usage. As of mid-December, the YMCA and some schools have re-opened, but at a limited capacity, so usage was still decreased from last year's levels. Additionally, the City of King has seen a 500% increase in the number of customers who have delinquent bills—going from about 1% pre-COVID to about 5% in August. With the increase in customers being past due on their bills, they looked to CARES act funding to help and started developing their own customer assistance program.

The City of King received $375,540 from Stokes County and $7,636 from Forsyth County, for a total of $383,176 CARES Act funds. They allocated $30,000 for assistance with utility bills and partnered with King Outreach Ministry to distribute these funds, with an initial allocation of $5,000. King Outreach Ministry screens applicants and distributes the funds to customers who are over 60 or are in the low to moderate income category. Applicants must prove a financial hardship due to COVID-19. Once approved, a household can receive up to $500 to pay towards their water utility billing balance accrued between March 31st and July 29th. The maximum arrearage was $600, so the cap at $500 will cover most of the bill. By the end of December, they had used $1,860 of the funds. Most of the grant applicants didn't qualify for assistance because they didn't have a COVID related reason for the delinquencies. The rest of the money allocated for utility grants will go towards other COVID-related expenses.

Additionally, at the end of July and the EO124/142, the City of King had over $87,000 in bills past due, but as of January 4th they were down to slightly under $4,500 in bills past due, all of which are on payment plans and expected to be paid in full by January 31st. Many customers did not pay bills because of EO 124/142 and though perhaps they would be forgiven, but when the EO expired, they paid, enrolled in a payment plan, or were disconnected. In September, October, and November, 71,

98, and 66 customers were reconnected after being disconnected.

The City of King utility assistance donation program started in September, and utility staff hoped that they can accumulate enough funds to continue to provide assistance even after the CARES Act Funds are depleted. However, they received no enrollments in the donation program and won't be able to use that program to fund help with utility bills going into the future.

Other CARES Act funding when towards cleaning supplies and PPE ($15,000) and reimbursing the utility for covering credit card convenience fees. In March, the utility reimbursed customers for their online bill payment convenience fee. This lowered the barrier to customers making online payments, but the utility incurred a total of $24,145 in expenses for those fees from March to December. The town council have voted to pay those convenience fees through June 30, 2021 and are now directly charged from the 3rd party processor instead of need to reimburse the customers directly. The number of customers who paid online doubled between August 2019 and August 2020 and is 20% of their customers. After the lobby opened in mid-September, the number of online payments decreased to a more typical amount (~10% of customers).

The City of King also experienced some operational impacts from COVID-19. In March, King rotated out public utility staff who worked in the field or in the treatment plant so everyone was in smaller teams and only worked 2-3 days a week. In August, they were back to a normal schedule. City Hall closed to residents, but the drive thru was still open, making it easy for customer who like to pay in person to still do so. Collections and customers service staff could work remotely as well, so they were able to continue operations without much disruption. In mid-September, the lobby was opened back up and more online payment options were added- GooglePay and ApplePay.

Although the water and wastewater department of the City of King experienced some difficulties due to COVID thus far, staff have adapted to this challenge to create something new by adjusting payment options, creating a donation-funded (and unfortunately unsuccessful) Customer Assistance Program, and using CARES money for pandemic related expenses. While the long-term implications of COVID and EO 124/142 remain to be seen, the City of King was able to use CARES Act funding for bill assistance, reimbursing for convenience fees as well as equipment and supplies related to COVID-19 expenses.

Appendix C: Helpful Resources

The following list leads to organizations that can regularly work with government-owned water and wastewater utilities across the state of North Carolina

Resource Agency Partnership for Water Utilities

Environmental Finance Center/School of Government at UNC-CH

https://efc.sog.unc.edu/

UNC School of Government

http://sog.unc.edu

NC Department of Environmental Quality

https://deq.nc.gov/

Local Government Commission (LGC)

https://www.nctreasurer.com/state-and-local-government-finance-division/local-government-commission

North Carolina League of Municipalities (NCLM)

https://www.nclm.org/

North Carolina Association of County Commissioners (NCACC)

https://www.ncacc.org/

Council of Governments (COGs)

https://www.ncregions.org/

Southeast Rural Community Assistance Project (SERCAP)

http://sercap.org/

North Carolia Rural Water Association (NCRWA)

https://www.ncrwa.org/

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11. Interview with Elizabeth Buffaloe (Administrative Officer) of the Halifax County Public Utilities, November 18, 2020
12. Interview with Sharen Apple (Accounting Manager) Town of Jamestown, October 15, 2020
13. Interview with Shannon Moore (Finance Director) at City of Salisbury, October 23, 2020
14. Interview with Susan O'Brien (Director of Finance and Personnel), City of King, August 19, 2020
15. Interview with HilIary Gropp (Town Clerk), Town of Seven Devils, October 28, 2020
16. Conversations with Gregory Jenkins (Revenue Manager), Town of Cary, July-December 2020
17. Interview and emails with Dave Johnson (Assistant Executive Director), Yadkin Valley Sewer Authority, July-December 2020
18. Interview with James Ayers (Town Manager), Town of Manteo, August 13, 2020
19. Email correspondence with Janie Garrish (Office Manager), Ocracoke Sanitary District, October 2020
20. Interview with Brenda Clark (Administrative Services Director), Town of White Lake, October 8, 2020
21. Conversations with Jennifer Alford (Fiscal Manager), Raleigh Water, July-December 2020
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23. Interview with staff at the City of Clinton, August, 2020
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