

The New Day Project

Mapping DeKalb County's Water Billing Issues

Version 2, updated Feb. 23, 2017, 4:30 p.m., to remove typographical errors.

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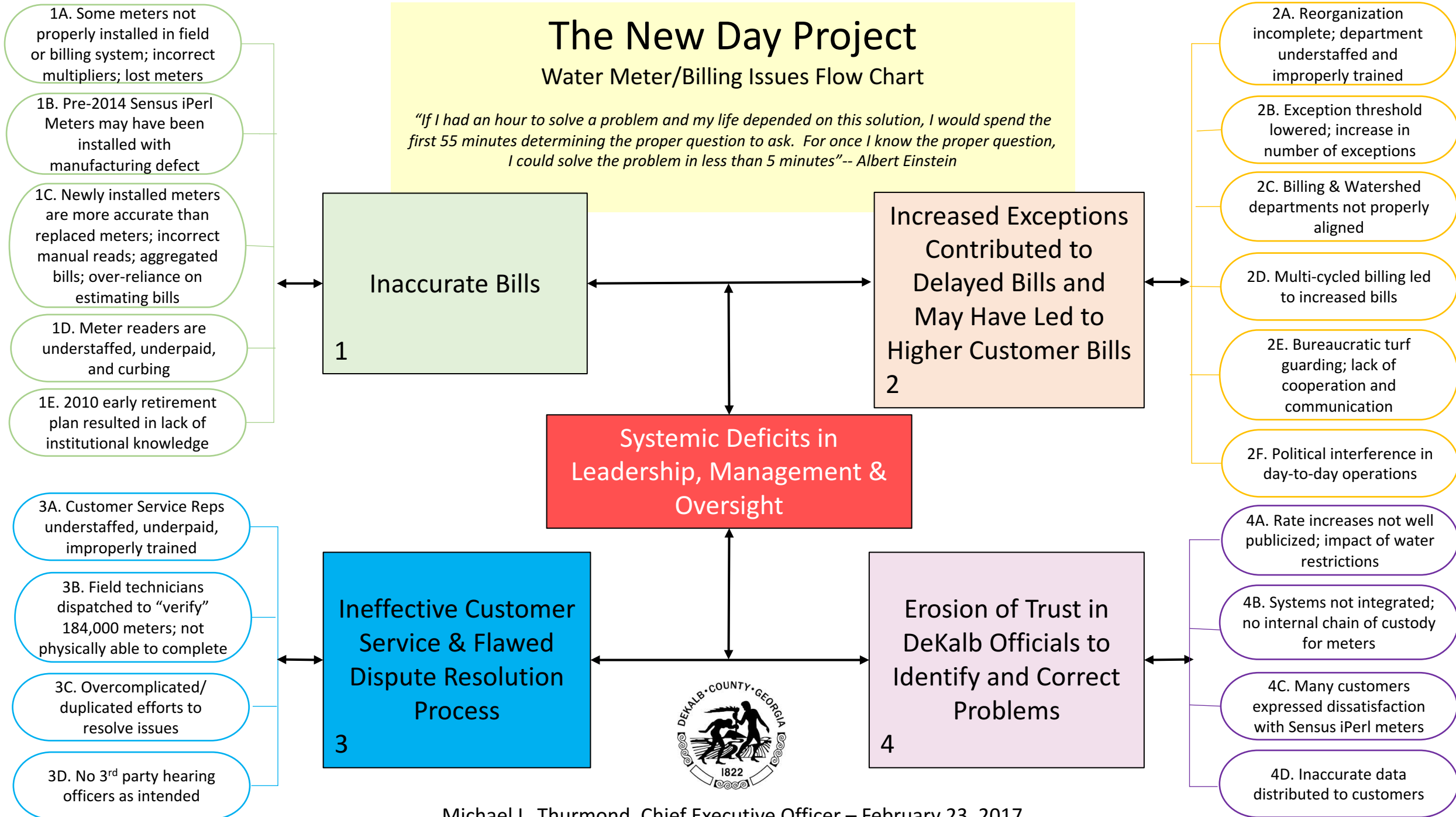
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Water Meter/Billing Issues Flow Chart

"If I had an hour to solve a problem and my life depended on this solution, I would spend the first 55 minutes determining the proper question to ask. For once I know the proper question, I could solve the problem in less than 5 minutes"-- Albert Einstein



Water Meter/Billing Issue Flow Chart Key

1. Inaccurate Bills

- A. Some meters not properly installed in the field or in the billing system; incorrect multiplier; lost hidden meters
 - An indeterminate number of new water meters have been housed in a mixed-use warehouse which included both 1- and 100-gallon residential meters and industrial meters. Meters are calibrated with a specific multiplier prior to being shipped, depending on their use. If an industrial water meter was installed at a residential site bills would skyrocket.
 - There are documented instances where meters data was loaded into the billing system with an incorrect multiplier.
 - Meters throughout the county vary in age from just a few months to multiple decades old. Over time approximately 3,000 meters have been buried under sidewalks, structures or landscaping.
- B. Pre-2014 Sensus iPerl meters may have manufacturing defect
 - Beginning in 2011, Sensus iPerl water meters were installed to replace aging and failing water meters throughout DeKalb County. Approximately 70,000 meters were installed over the course of five years. Sensus has acknowledged that iPerl meters manufactured prior to July 2014 contained a defect that potentially caused malfunctions when moisture or water came into contact with internal mechanisms. Approximately 40,000 of the iPerl meters installed in DeKalb County are at risk of malfunction.
- C. Newly installed meters are more accurate than replaced meters; Incorrect manual reads; aggregated bills; over-reliance on estimated bills
 - a. The county's daily "exception rate," which describes how often technicians record unusual consumption or are unable to get a meter reading, is approximately 25%. The industry standard is 6% - 10%. When a technician is unable to get a reading or consumption seems amiss, bills are often delayed, which can lead to inordinately high bills for consumers if charges from multiple billing periods are condensed into a single large bill.
- D. Meter Readers are understaffed, underpaid, and curbing
 - a. Meter readers are understaffed, underpaid, lack daily supervision and are not provided proper training. In 2016, there were documented instances of "curbing" by at least one meter reader. Curbing occurs when a meter reader fails to verify actual consumption recorded by the meter and simply "sits on the curb" and manually enters false data into the record. Although the curbing

offender was identified and fired, more than 10,000 readings may have been falsified.

- E. 2010 Early Retirement Plan resulted an erosion of institutional knowledge
 - a. Retirement buyout resulted in a mass exodus of most experienced employees. The County lost a significant amount of institutional knowledge in the billing and watershed department.

2. Increased Exceptions Contributed to Delayed Bills & Higher Customer Costs

- A. Reorganization incomplete; department understaffed and improperly trained
 - o In the fall of 2015, the Finance Department initiated a reorganization and established the Utility Customer Operations Unit (UCO). Many experienced workers were dismissed and replaced with less experienced temporary workers. Furthermore the remaining phases of the reorganization have yet to be completed.
 - o UCO Unit is underpaid, understaffed, and not properly trained to manage the county's evolving billing operations. Historically, employees were instructed to estimate a customer's bill who complained about high or irregular bills without ever determining the root cause(s) of the problem. Over reliance on this practice has contributed to the severity of the water billing crisis.
- B. Exception threshold lowered; increase in number of exceptions
 - o In 2015, the threshold for exceptions was lowered from 500% to 300% causing an increase to the number of exceptions. The County is currently averaging 18,000 exceptions each month. The UOC is tasked with the responsibility of resolving billing issues and clearing flagged exceptions prior to billing the customer. If an exception is not cleared, a bill should not be generated. If a bill can't be generated, customers are left with no accounting of their consumption for that billing cycle.
- C. Billing & Watershed departments not properly aligned.
 - o UCO and the Department of Watershed Management currently operate as two distinct functions in two separate locations. As an inherently intertwined operation, there must be improved alignment in management, function and proximity. The lack of coordination and effective communication between the departments increases the probability of human error and more difficult to identify and solve water billing problems.
- D. Multi-cycled billing led to increased bills
 - o Due to some bills being delayed for several cycles, there were instances in which multiple billing cycles were included on the same billing statement. In those

instances the billed amount pushed a customer into an increased billing tier, causing the customer to have a higher bill than normal.

- E. Bureaucratic turf-guarding; lack of cooperation and communication
 - Leadership at every level in the water billing process has prioritized defending their department and isolating its “role” at the expense of finding solutions. In too many cases, issues are designated as falling either wholly within the jurisdiction of a department or completely outside of their jurisdiction, while the reality of the situation is that the issues are cross-departmental
- F. Political interference in day-to-day operations
 - Water billing and county infrastructure resources should be managed by trained, educated and experienced professionals. Inappropriate political activity in the day-to-day operations of Watershed Management have contributed to dysfunction and ineffective service delivery.

3. Ineffective Customer Service & Flawed Dispute Resolution Process

- A. Customer Service Representatives understaffed, underpaid, and improperly trained
 - As the County’s first responders to billing issues, customer service representatives should be equipped with the knowledge and information needed to assist customers with issues concerning their bills. The customer service team is understaffed, underpaid, and have not received the proper training to deal with the myriad of issues and high call volume.
- B. Field Technicians dispatched to “verify” 184,000 meters; not physically able to complete
 - In a letter dated December 28, 2016, the County promised to send a field technician to visit and verify each meter within a year. That action has not been initiated and is currently impossible to complete.
- C. No Third-Party Hearing Officers as intended

Customers were told a third party hearing officer would be available to resolve disputed bills, and that has yet to happen as intended. Currently, the dispute resolution process ends with the Finance Director who is given the authority to resolve disputes pursuant to Section 25-106 of the Code and an October 2016 Resolution adopted and approved by the governing authority.

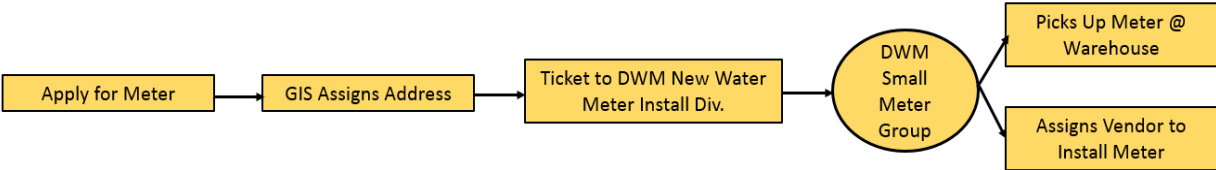
4. Erosion of Trust in DeKalb Officials to Identify & Correct Problems

- A. Rate increases not well-publicized or impact of drought

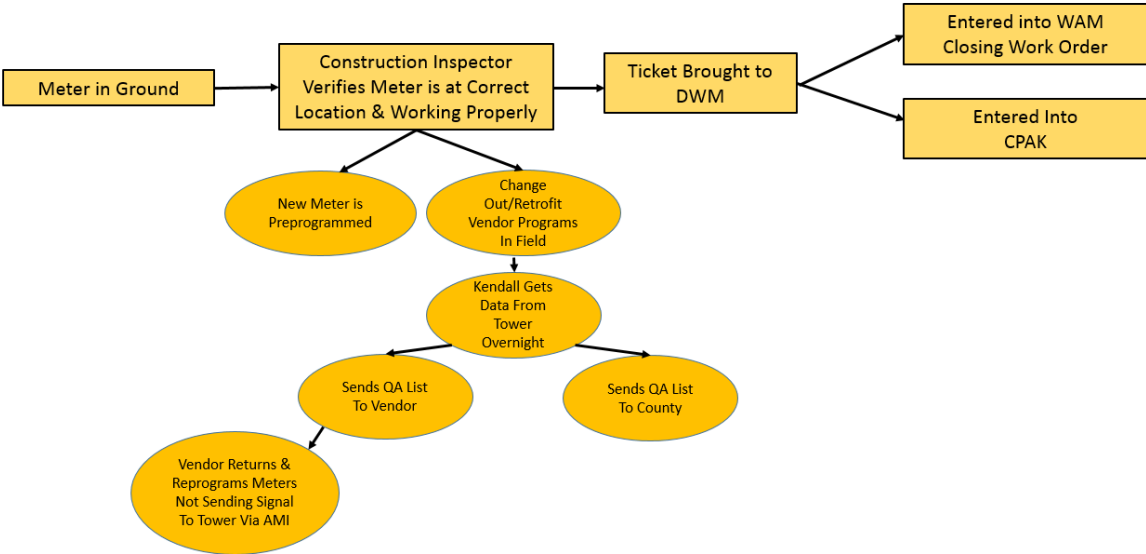
- Between 2008 and 2011, rates increased 16% each year. Additionally, due to the Consent Decree put in place by the EPA in 2011, DeKalb County is federally mandated to make hundreds of millions of dollars of improvements to the county's sanitary sewer systems. In order to pay for capital improvement projects, water/sewer bills were increased again by 11 percent in 2012, 2013, and 2014 respectively, but poor communication resulted in misunderstandings by county residents. Bills have increased leading to confusion and frustration directed towards the County.
 - During the time of the rate increase, the County was under Level 2 drought conditions, and therefore residents were conserving water at a higher rate than normal. Once the drought conditions receded residents began using water at pre-drought levels but it was now costing more due to the rate increase. Customers were not effectively educated on the correlation and effects that the rate increase would have on the return to normal consumption level.
- B. Systems not integrated; key components controlled by vendors
- The various software used to track water meters, water consumption, and customer billing are outdated and are often unable to transmit data directly to and from one another. County employees have had to rely on a mix of software and human input to transmit data, which leaves the entire system open to multiple opportunities for error in the water billing process.
 - The lack of control that the county has over its own billing systems has allowed complacency to set in, even as county billing software becomes more obsolete and error-prone by the day. Customers are aware of the lack of modernization in county systems, which makes it more difficult for them to trust the data that is produced.
- C. Customers do not trust Sensus iPerl meters
- News reports from across the country have documented issues with the Sensus iPerl meters. Although it has been narrowed down to the pre- 2014 iPerls, and the manufacturer has corrected all defects, customer trust issues remain. In October 2016, the County decided to cease the installation of iPerl meters.
- D. Inaccurate data distributed to customers
- The distribution of inaccurate billing data, either intentional or unintentional, is one of the biggest factors contributing to the erosion of trust in county officials. The county must renew its commitment to quality control and assurance in order to convince DeKalb residents that the county is capable of identifying and correcting the problems associated with water billing.

Meter Process Flow Chart


Meter Install Process (Part 1)



Meter Install Process (Part 2)



Rate Increase Analysis


DEKALB COUNTY WATER/SEWER
 DeKalb County **AVERAGE BI-MONTHLY WATER/SEWER BILL (2007 - 2016)**
GEORGIA

| Year | WATER \$/1,000 gal | | | | Water Readiness to Serve | TOTAL WATER COST | SEWER \$/1,000 gal | Sewer Readiness to Serve | TOTAL SEWER COST | TOTAL BI-MONTHLY BILL - WATER & SEWER | % Annual Increase | % Increase From 2007 |
|------|--------------------|-------------------------|--------------------------|---------------------|--------------------------|------------------|--------------------|--------------------------|------------------|---------------------------------------|-------------------|----------------------|
| | Tier 1 | Tier 2 | Tier 3 | Tier 4 | | | | | | | | |
| | 1st 4,000 gallons | 4,001 to 20,000 gallons | 20,001 to 40,000 gallons | over 40,000 gallons | | | | | | | | |
| 2016 | \$2.16 | \$3.08 | \$4.63 | \$8.08 | \$5.68 | \$48.20 | \$11.34 | \$13.80 | \$183.90 | \$232.10 | 0% | 212% |
| 2015 | 2.16 | 3.08 | 4.63 | 8.08 | 5.68 | 48.20 | 11.34 | 13.80 | 183.90 | 232.10 | 0% | 212% |
| 2014 | 2.16 | 3.08 | 4.63 | 8.08 | 5.68 | 48.20 | 11.34 | 13.80 | 183.90 | 232.10 | 11% | 212% |
| 2013 | 1.94 | 2.77 | 4.17 | 7.27 | 5.12 | 43.35 | 10.22 | 12.44 | 165.74 | 209.09 | 11% | 181% |
| 2012 | 1.75 | 2.50 | 3.76 | 6.55 | 4.60 | 39.10 | 9.21 | 11.20 | 149.35 | 188.45 | 11% | 154% |
| 2011 | 1.58 | 2.25 | 3.39 | 5.91 | 4.16 | 35.23 | 8.29 | 10.10 | 134.45 | 169.68 | 16% | 128% |
| 2010 | 1.36 | 1.94 | 2.92 | 5.09 | 3.58 | 30.36 | 7.15 | 8.70 | 115.95 | 146.31 | 16% | 97% |
| 2009 | 1.18 | 1.68 | 2.52 | 4.39 | 3.10 | 26.30 | 6.16 | 7.50 | 99.90 | 126.20 | 16% | 70% |
| 2008 | 1.01 | 1.44 | n/a | n/a | 2.66 | 22.54 | 5.31 | 6.46 | 86.11 | 108.65 | 46% | 46% |
| 2007 | 1.10 | 1.10 | n/a | n/a | 4.80 | 21.23 | 3.22 | 4.80 | 53.10 | 74.33 | n/a | n/a |

Average household size in DeKalb = 2.5 persons

Average consumption is 100 gal/person/day = 3,000 gal per month

Average consumption per household per bi-monthly billing cycle = 15,000 gallons

** Per the US EPA:*

The average American family of four uses 400 gallons of water per day. On average, approximately 70 percent of that water is used indoors, with the bathroom being the largest consumer (a toilet alone can use 27 percent!). <https://www3.epa.gov/watersense/pubs/indoor.html>.

17-Jan-17

Conclusion

Increased exceptions, inaccurate billing, an ineffective dispute resolution process, and the lack of trust in DeKalb County officials have all contributed to a systemic failure of leadership, management, and oversight. There is no one quick fix for DeKalb County's water billing problems – there are dozens of interconnected “root causes” that were allowed to fester unchecked over the course of years or decades which have culminated in the current crisis.

Now that our problems have been identified, solutions will be implemented. There is a long road ahead, but with effective coordination, increased communication, and a commitment to putting DeKalb residents first, we will restore trust, integrity and competency to DeKalb's water billing system.