CUSTOMER SERVICE & BILLING OPERATION ASSESSMENT

Prepared for

CITY OF PETERSBURG VIRGINIA

103 Tabb St

Petersburg, VA 23804

6/1/2017	Assessment Period May 15-18

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Customer Service & Billing Operation Assessment

ASSESSMENT PERIOD MAY 15-18

Background

The City of Petersburg Utilities has encountered years of mismanagement and deployed an Automatic Meter Reading (AMR) installation from 2014 – 2016 that created flawed account information on several customer accounts. Also, not all commercial meters were transitioned to the new AMR system. During that time, the utility was unable to produce bills based on actual consumption and distributed minimum bills to customers. The monthly billing was based on estimated consumption during November 2015-May 2016. The collection rate of billed revenue said by the staff appears to be less than 70% each month due to the enormous adjustments to accounts. Also, there is an unknown amount of missed revenue by not billing actual consumption for the period said above.

To increase its revenue, the city recently implemented a rate increase of 14.1% and has another 13.4% increase to be applied soon. Now that the true consumption captured and billed, along with the recent rate increase, the city has experienced a significant increase in customer complaints. The city wants to understand the drivers of the missed revenue from utility billing noted as $1.5M each month.

Executive Summary

A 3-day assessment was conducted on the Customer Service, Meter Reading, and Billing departments of the City of Petersburg, VA utility office. Improvement opportunities were found in the areas of resource management, policy, processes, technology, meter reading, reporting, and financials. Many of the staff have the desire and capability to improve the Utility Office operations. Unfortunately, they do not have the tools, efficient processes, training, or support to effectively perform in their roles. The technology and processes lack the financial controls to ensure the actual water usage consumed is read, billed, collected, posted, reconciled, and reported accurately each month. Key financial issues observed were the extremely large adjustments to revenue and lack of controls. This document provides the details of what was discovered.

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Resources

Monthly Utility Charge Report as of 05/19/17 & 06/28/17
Detailed Utility Charge Report
Aging Report as of 06/22/17
Adjustment report
Meter Reading Book Assignment
Onsite Notes
Interviews with staff

OPERATIONAL ASSESSMENT

Resource Management

Staff Positions
- **Customer Service & Billing** - (1) Supervisor, (1) Billing/Admin Clerk, and (2) Customer Service Reps. The group reports to a General Manner that resides at another location. The employees at the Customer Service and billing office do not take any payments. All payments are processed by the CSR's at the treasurer office.
- **Meter Reading Department** -is formed of (1) Supervisor (4) Meter Readers/Service Techs.
- **Treasure Office** – The number of employees that make up this department was identified as (1) Treasurer, (1) Supervisor, and (4) Customer Service Reps.
- **Information Technology**-Totaling 5 staff member within the Information and Technology department. This includes (1) IT Director, (1) Computer Systems and Network Manager, (1) contractor for IT, (2) employees for various things including equipment setup and installations.

Staff Capability and Training
- The roles of the staff and goals are not defined which hinders accountability and performance.
- Training documentation for the billing system is not readily available to employees. All information on the system or report requests must be made to IT. Lack of training and documentation increases risk of significant errors that could lead to financial exposure. For example:
  - Several large adjustments performed in the system which affected the revenue month over month. This makes it very difficult to know how much revenue was generated during the month if the adjustments aren't monitored. During the period of July 2016-Sept 2016, there were several adjustments to the water and sewer accounts over $1 million dollars with others exceeding $9 million dollars. Although these adjustments were quickly reversed on the customer's record, the entries were still showing on the general ledger detail for a couple of months afterwards. Proper new hire training would have prevented these errors from occurring. The current configurations of the billing system should have allowed the corrections to completely reverse the error automatically. Instead, the system administrators had to make corrections on the back-end months later.
- Employees do not have proper system access based on role to create help tickets to obtain support with the vendor. The billing staff need the proper access and system support to diagnose issues promptly. For example:
  - Security levels are inefficient. The billing clerk has access to certain functionality in the system that the supervisor or manager does not have. It is hard to check unauthorized transactions if you do not have access to the reports or programs within the system. There is no one checking the overall adjustments being completed in the system, nor payments vs. the amounts deposited in the bank. It was noted certain access was

removed from supervisors therefore making it impossible for them to oversee what the lower level employees are doing. For example:

- **Billing Process**- Supervisor does not have capability to process a billing in the event the billing clerk is out of the office.
- **Adjustments-S**upervisor does not have the capability to complete adjustments, but the billing clerk who reports to the supervisor does.

- There was an issue with the customers being charged improperly for the 1" meters. The billing calculations were checked and compared to the system calculations. It was determined that the rates were changed incorrectly and resulted in customers having to be debited for the amounts they were under-charged. The issue was reported to the local IT staff, and was only addressed when the customers started complaining.
- The Meter Reader supervisor must rely on the IT Director to build the download file to load the handhelds. The IT Director then must come to the supervisor's office and install the new file on the computer every month. This means that the Meter Readers cannot begin work until this process has been completed. This process could cause delays as the billing process can't be completed until the reads are in and re-checked if necessary. This process should take approximately 10 minutes to complete, yet it can take hours depending on the availability of the IT Director.
- Accounts identified in the field with the incorrect Electronic Reader Transponder (ERT) information on the account setup require the IT manager to correct in the system. Resulting in accounts with an (ERT) installed having to be read manually to ensure the meters were read properly. Once the information is provided from the field, the information could take months for someone to update in the system. The accounts that were identified and reported a year ago, were recently corrected in the billing system.

- The supervisor does not have access to the necessary reports to monitor transactions completed in the system.
  - Accounts Receivable Report that details what was billed, collected, and adjusted.
  - Billing registers are sent to the supervisor by the billing clerk in excel format which doesn't provide much oversight as to what was posted in the billing system.

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Utility Policy & Procedures, and Billing System Manual

Policy & Procedures-The Utility office lacks a well written policy and procedure manual that aligns with the city ordinances. The policies and procedures manual ensures that employees have direction as to the expectations of how the utility is to be operated. Currently, the Customer Service and Billing staff rely on their personal notes to perform their roles. This leads to missteps in process, gaps in service, and eventually financial exposure for the utility.

Billing System-There are no documented instructions on how to utilize certain programs within the system. New employees would require this document for training purposes and to assist with daily tasks performed in the billing system. New employees are forced to make their own training manuals and learn the system by trial and error. There is no consistency in the training process to ensure everyone receives the necessary tools to be successful.

Technology

Billing Platform

- The Billing system runs on a AS400 main frame utilizing ISeries Software. Version of software was unknown and could not be provided by any of the local IT staff.
- System is supported by BAI and two onsite IT administrators.
- Security permissions in the system are not properly assigned. The security level is not associated with the proper job title. e.g., the billing clerk has privileges to perform tasks in the system that the supervisor doesn't have.

The current billing platform is an older system, but the functionality is not fully utilized. It appears that the programming knowledge is limited. One example is the fact that neither the Director nor the manager could provide the current version of the software. Also, it was implied by the Manager of IT that BAI does not have software versions. The current software package or configuration creates a lot of unnecessary work arounds which makes employees less productive. There is a lot of wasted time on redundant tasks that should be more user friendly.

Billing System Functionality

- **Notes –** This function deployed across departments does not have the same capability. E.g., the Customer Service & Billing staff have limitations when it comes to documenting notes on the accounts. They only have 4 lines with limited characters to display historical and new notes. Each time a new note must be created on an account, one note must be deleted. The staff in the treasures office has unlimited characters and lines and does not have to delete previous notes. Deleting notes may lead to potential audit and financial exposure.

- **Audit Trail-**The lack of processes, documentation, and notes with explanations documented for adjustments poses a problem if the utility was ever audited. It also makes it very hard to hold employees accountable for fraudulent activities.

- **Payment Plans** are currently tracked manually. The system is tracking which customer is on a payment plan, but does not track terms such as start date, monthly increments, balance owed vs balance remaining. This causes an issue if a payment is missed, the account could remain active without a payment being received. Payment agreements are manually tracked and the only method of tracking in the system is a "Y" in the field for payment plan. The billing staff does not have the capability to run a report which identifies the total amount outstanding for customers who are setup on a payment agreement.

- **Compound Meters** are not setup in the billing system to automatically calculate consumption in an efficient manner. The current process is manual and increases the chances of errors. This practice also does not allow for a complete audit trail of the meter reading history to be stored in one place. For example:
  - The compound meters are isolated into a separate book (Book 200) which consists of approximately 70 accounts. The reads for each dial are entered in the handheld and uploaded into the billing system. The billing clerk checks all the other books for accuracy before proceeding to process the readings for book 200. The billing clerk then takes the readings and enters them into an excel spreadsheet with formulas to calculate the usage by combining the total consumption for both dials. This usage is then entered in the billing system as the consumption to be billed. The compound meters measure the high and low flow of water usage. It is important that the system is setup to track both dials and consumption to ensure the revenue is captured accurately. This double entry method increases the risk for readings and consumption to be transposed.
  - **Data validation-**The system lacks the ability to validate the mailing addresses in the system. There is not a process in place for returned mail. While onsite, a bucket of unprocessed returned mail was noticed. All the mail was returned undeliverable because the addresses were bad addresses from the billing system. Below are examples problems and reasons why this is needed.
    - Allows the Utility to receive discounted rates for the postage utilized to mail customers monthly statements with the ability to pre-sort mail.

Phone System

- The phone system installed is from Comcast Communications. Currently, the management team does not have the capability to run reports and track metrics on missed calls, wrap time, drop calls, or compile any data to monitor the performance of the staff responsible for customer service. Also, unable to play back and listen to recorded calls from customers that launch complaints against the staff or city. Having this capability will allow management to hold employees accountable and ensures great customer service is provided always.

Website

- Website is missing information that could reduce the number of phone calls to Customer Service Without a call center environment, the customers are forced to call Customer Service which drives up call volume. The website is the cheapest vehicle to communicate and support customers. The complete information to the areas below can be found in the city's code of ordinance. See the examples below:
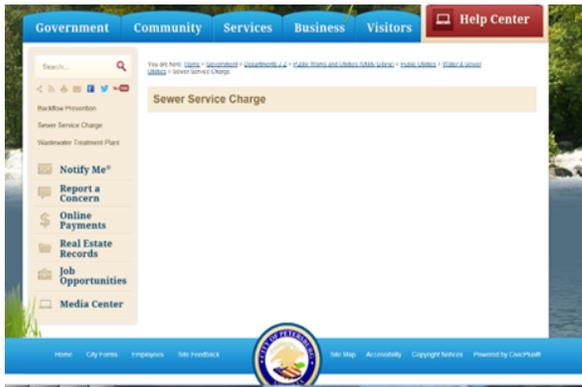
Meter Reading

- Meter Reading system is an ITRON solution. MVRS 8.6.5 is the version of the meter reading software used to upload and download the readings.
- The file used to download/upload into the handhelds is manually transferred by the IT personnel every month.
- There is not a meter reading schedule to ensure that customers are billed on average 30-32 days per billing cycle. Also, this results to inconsistent monthly cash flow.
- The work order process is not the most efficient process. Meter Reading Supervisor must periodically check the system for work orders throughout the day which is neither productive or efficient.
- Work-orders completed and returned in the field have no status to ensure that services have been completed.
- The city replaced approximately 10, 000 of the 5/8 X 3/4 meters with new AMR meters and purchased the hardware and software that was required to start automatically reading their meter. There are still approximately 1300 commercial/industrial meters that remain that were not changed out.
- The city has large meters that are running both backwards and forwards which is causing them to drastically lose revenue. For example:
  - The city sells water to Prince George County by way of a 6" meter. This meter records the usage for all the water going to the county. Pressure causes the flow of water to run backwards sometimes which passes through the meter in reverse order. This produces negative usage that gives the appearance that the meter is running backwards thus losing revenue for the city as the water was passed through the meter yet the revenue not captured.

- Large meters where the high flow side of the meter register is not registering.
  - There is a 6" compound meter located on Johnson Rd where the high flow appears not to be registering. Either the meter has an issue that causes it to not register or the meter size is too big for the application in which there is not enough flow going through the meter to register. Either way, it's the meter is not accurately measuring the amount of water used in each month.

- When the meter readers are not reading the meters, they are completing turn on and turn off as well as installing new meters, changing out transponders that either have the same serial number or has just stopped working, and repairing damaged or cut cables.
- Some of the meters were listed on the wrong street causing the meter readers go back to the site address or wait until he/she gets to the correct street before the computer will collect the meter reading. There was approximately 300 meters that had to be corrected starting in May of 2016-January 2017. A portion of the corrections were from incorrect ERT's in the system and the remaining were from meters continuing to be changed. This data has been submitted on a weekly basis since May of 2016 and was just corrected in the system in the last couple of months.
- The meter readers must go back and re-read the AMR meters manually due to either meter box being flooded with water interrupting the signal from the (ERT) Encoder receiver transmitter or the

battery needs replacing. Incorrect information in the system is identified by the Meter Reading staff and reported to IT to make the necessary changes in the system. The delays in correcting the data result in a lot of unnecessary manual reading.

- The city currently has about 11564 meters that measure water in gallons and another 800 that measures in cubic feet.
- Services offered doesn't quite match the availability of the employees during normal business hours. The meter reading staff work hours are from 7:30 – 3:30pm. Office hours are 8 am to 5pm and same day reconnects are offered until 4pm. The hours above will cause the on-call employee to work longer hours if a customer pays to have services restored after 3:30 by 4pm after staff has went home for the day.
- There is currently no cross-connection process followed, nor any information about cross connections on the website. None of the sites visited in the field had back flow devices installed. In certain instances, pressure causes a jack-hammering effect which causes water to flow in the opposite direction creating the illusion of reverse flow. Other instances could simply have a meter installed backwards causing the meter to register negative usage. Ultimately, this causes billing problems as the correct usage is unable to be measured properly on the larger meters that use high volumes of water.
  - Currently, none of the sites observed have backflows installed on the residential nor commercial installations. The back-flow preventers also service the purpose that will prevent cross contamination in the main water system.
- Older vehicles require more maintenance than newer vehicles. In some cases, the maintenance expense ends up being more than what the vehicle is worth and puts a strain on the budget trying to keep them operative. The meter reading staff has five trucks. One truck remains in the yard in need of repairs.

Reports

- Reports out of the system are not adequate to provide management with a complete overview. They provide limited customer information by transaction. For example:
  - The detailed general ledger transaction report list does not contain any unique customer information. If there is a large adjustment in error, you can only see the source, date of transaction and amount.
- Access to specific reports are not properly identified to provide the proper oversight.
- All employees do not have access to canned reports within their scope of work built in the system. BAI provides browser based report menu to retrieve some reports, but it requires the user to obtain special permission and login credentials to access. The current setup requires staff to requests reports from IT personnel on a regular basis just to perform daily tasks. The staff does not appear to be equipped with the necessary tools to perform their daily jobs because of programming and setup limitations of the billing system.

Billing Processes

- Billing is completed once a month around the 11th. It takes 4 days from when the readings are uploaded to print, seal, and mail the bills.
- Bills are due 20 days after the bill date.
- Late fee of 10% is assessed 2 days after due date (which hasn't been done since Sept of 2015).
- The current policy requires an additional 1% penalty interest to be assessed if payment remains unpaid every 30 days. (These charges haven't been assessed on any accounts since September of 2015.)
- Delinquent reminder goes out 10 days after due date.
- Disconnect notice goes out 10 days after Delinquent reminder is mailed
- Disconnects are performed on the 2nd Tuesday of every month.
- Garden/Irrigation meter readings are manually read by the customers and readings are called into the office for billing purposes. Adjustments to remove the sewer portion is then manually calculated and adjusted off the regular monthly billing.
- Same day service is offered if customers request by 3:30 pm. No additional fees are charged.
- New accounts require documentation such as Lease, government issued ID, and full social security number. The collection of the social security numbers is a liability to the utility and could possibly violate some privacy laws if documents are not stored properly.

Financials

Rate Structure

- Customers are billed for every gallon used. There is not a minimum number of gallons allowed for the base fees like most utilities. Billing is calculated by 2 different methods. Meters that were not changed out are measuring water in cubic feet, and meters that were changed out are measuring gallons.

Payments

- Payments are posted by the treasurer office.
- Treasury office closes at 4:30 pm. Billing and Customer Service office closes at 5pm.
- New Tap Fees are provided to the customers by a representative located on 424 Saint. Andrews St, from this point, the customer must make 7 additional trips back and forth between the billing office and the treasurer to get the account fully setup.
  - The customer must request the cost of the tap from office located on 424 St. Andrews St. The office is away from the clerk's office and billing office.
  - The customer then comes to the Billing office to get the account setup and take paperwork back to the treasurer's office to pay for the tap.
  - Customer then brings the receipt of the paid tap back to office on St. Andrews St to create the work order for the tap to be completed in the field. The representative then creates a hand-written work order to install the new tap.

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- The customer brings the receipt of the money paid for the tap back to the billing office and initiate setup of the account to start new service.
- Once the tap is completed, the customer is notified. The customer then must return to billing office to get the deposit and connection fees added to the account and take the paperwork to the treasures office.
- The customer returns to the treasurer's office to pay the connection fees and deposit on the account.
- The customer then takes the receipt of the paid connection fees back to the billing office to officially activate their service.

- Having the utility payments in a separate location creates a gap in communication as no one is monitoring if or when deposits/connection fees have been paid after the service is created in the system.
- There are no controls in place to ensure that the amount of money that was collected is the correct amount of the deposit that went to the bank. The only process found was the daily balancing of the cash drawer in which the supervisor ensures the CSR's balance. There are no additional controls after the daily process is completed to monitor cash flow particularly as it pertains to tap fees.
- Deposits are not required for all new tenants or new customers. Rule is if they have a current service in the system, a deposit is not required.
- Payments are allocated to various General Ledger Codes in the following priority order:
  - Refuse (Garbage)=Priority #1
  - Storm water=Priority #2
  - Taxes=Priority #3
  - Admin Fee (Deposits & Connection Fees) =Priority #4
  - Penalty =Priority #5
  - Interest=Priority #6 but labeled #5
  - Sewer=Priority #7
  - Water=Priority #8
  - Overpayment=Priority #9

Billed Water $30, Sewer $40, Refuse $15, and Taxes (based on water) $15=$100	Payment Collected $75	Current Payment allocation=$15 Refuse, $15 Taxes, $ 40 Sewer, and $5 Water=Total $75

Payment Allocation Example

Financials

Payments

- Example of current payment allocation-The amount of taxes generated is usually based off water sold. In the example, above, the utility only collected $5 of the $30 billed for water because of the hierarchy. This means that when a customer makes a partial payment, the portion of the customer's payment that went toward water was reduced to $5 because of the current hierarchy setup in the billing system. In the current hierarchy, water is the last of the original charges billed to receive money in that bucket for amounts collected.   Per staff, the payment hierarchy hasn't been reviewed in 30 years.

Cash Flow

- Deposits are not being collected for all tenants when new service is started at a different location. The current process that is being followed allows tenants to setup multiple accounts at different locations. The current policy does not require a deposit if the customer has another active account in the system deposit that has a deposit on file. For example:
  - Joe Customer has an active account with a deposit on file. He activates 2 new accounts at 2 additional locations. If Joe decides to close all 3 accounts and doesn't pay the final bills, only 1 of the accounts would have a deposit to reduce the final balance.
- **Cycle Billing**-All accounts are billed together one time per month. This method makes all the payments due at the same time which also impacts cash flow. When a certain percentage of the customers does not pay, it puts a strain on the city's ability to maintain other ongoing expenses to manage the business.
- Utility does not bill in cycles which means that all residents are billed at the same time, and all payments are due at the same time. When you have a certain percentage of customers that pay on time, some late, some very late and then others not at all, this impacts the cash flow. Coupled with the current delinquency policy, customers may remain active and continue to utilize water without making a payment for nearly 3 months before being shut off. Meanwhile, the utility is continuing to incur the expense for the purchased water that remains unpaid.
- Late fees are not being assessed.
- Interest & Penalties are not being assessed.
- Disconnects have not been performed because meters were unable to be read for a period during the meter installation and afterwards. The utility recently started the disconnected process again which have some residents complaining. The issues from the meter change out and billing problem prevented the staff from performing disconnects. Since this time, the customers had become complacent and stopped paying their bills because they learned there were no consequences. A certain amount of revenue was missed from the inability to charge penalties and interest on the accounts that remained unpaid.
- Writes offs have not been processed in the past 3 years which means the accounts receivables are more than likely overstated. It was discovered that the Customer Service supervisor was the

person responsible for completing write-offs. Unfortunately, the supervisor was unaware of the responsibility nor was she trained on how to complete this process.

- There is no minimum amount defined for the refund process to prevent the production of a paper check and postage for bills less than $1. Since the utility must pre-pay for postage to send bulk mail, every opportunity to save makes a difference.

- Daily deposits are not being reconciled with the system reports to catch misapplied payments, and to avoid EOM balancing issues. Utility doesn't have proper oversight of cash flow.

- Minimum bills were produced for everyone after the meter change out by Johnson Controls because the serial numbers to the transponders were incorrect and didn't match the information in the billing system. This means during that time all the actual usage was not billed. When the electronic transponders were corrected, the begin readings started that month and all other water usage by the customer was not captured simply because the readings were adjusted to start from the current month. All the unbilled water forfeited should have been tracked as water loss which equates to lost revenue.

- Completed work orders from March were entered in the system in May, which means there a delay of when the usage was billed verses used.

- Water loss is not tracked which means that there is not a reconciliation of what is purchased from ARWA vs what is billed.

Financials

Deposit Reconciliation

- Several members of the staff were interviewed. It was determined that after speaking with members of the finance department, Customer Service & Billing, Treasurer's office, and IT that no one was truly reconciling the deposits that went to the bank against the transactions/reports in the system.
- There are no checks and balances in place to ensure that the amounts billed, collected, adjusted and deposited in the operating bank account are accurate.

Revenue

- Fees for other services appear to be low compared to other utilities in the water industry.
- Utility doesn't have an official tariff published that is approved by the city council that can be provided to the public.
- Consumption for commercial compound meters are manually calculated and entered in the system. Should be automated.
- Customers can submit their usage for garden meters which is not subject to sewer charges. This method requires a manual adjustment to the account to exclude sewer charges.
- Adjustments to accounts are not monitored nor limited to prevent fraud and abuse. Accounts can receive multiple adjustments for the same problem and no one would know. All the amounts adjusted reduces the amount of revenue generated thus reducing the amount of cash expected.

Write-offs

- After speaking with the staff and inquiring about various reports, it was discovered that none of the bad debt has not been written off in 3 years. Per the IT Manager, this hasn't been done in the last 3 years. This impacts the accuracy of total revenue. This affects the financial position of the utility and any future budget projections.
- There is not a documented write-off process.
- Utility does not have an agency that aggressively attempts to collect the unpaid bills before the account is written off.
- Accounts Receivables includes amounts that may be considered uncollected and outside the statute of limitations

Financial Data Analysis

Cash Flow

Cash Flow-The graph above represents approximately the amount of monies collected by the treasurer's office as it relates to water & sewer payments recorded in the billing system. A total of 20 months beginning Nov 1, 2015 through June 28, 2017 was analyzed. A more detailed analysis of the current payment allocation should be reviewed to determine exactly how much is collected for utility billing services rendered. The source of the data in the graph above was derived from the report label "Utility Charges" extracted out of the City of Petersburg billing system. When placed on a graph, the data should remain steady across all months with a few fluctuations. The graph shows several consecutive months for the period beginning Nov 2015 thru April 2016 with some months showing minimum amounts recorded. The data received was missing the month of December 2015 altogether.

Detailed Monthly Payment Transactions

Table-1

						20-Month Payment Totals					
Year	Month	Water	Sewer	Refuse	Admin	Taxes	Penalty	Interest	Special Chg	Stormwater	Total
2017	July	0									
2017	June	($142,226)	($360,073)	($136,528)	($2,965)	($27,407)	($228)	($488)	($5,234)	($71,399)	**($746,548)**
2017	May	($333,539)	($681,248)	($209,154)	($10,416)	($28,601)	($121)	($623)	($8,274)	($165,764)	**($1,437,739)**
2017	April	($173,834)	($529,853)	($194,485)	($3,959)	($50,014)	$2,768	($956)	($4,813)	($119,650)	**($1,074,796)**
2017	March	($254,685)	($476,530)	($193,228)	($3,106)	($36,585)	($342)	($1,104)	($9,288)	($110,573)	**($1,085,442)**
2017	February	($204,751)	($320,051)	($117,823)	($3,744)	($7,296)	($192)	($1,071)	($7,073)	($76,377)	**($738,378)**
2017	January	($294,579)	($457,710)	($181,057)	($4,242)	($29,257)	$202	($291)	($611,936)	($155,772)	**($1,734,642)**
2016	Dec	($208,072)	($463,091)	($177,973)	($3,897)	($26,310)	$322	($265)	($1,805)	($87,524)	**($968,614)**
2016	Nov	($204,609)	($447,027)	($172,678)	($4,711)	($96,794)	($1,532)	($487)	($14,979)	($113,283)	**($1,056,100)**
2016	Oct	($256,762)	($659,556)	($160,353)	($4,554)	($77,519)	$250	($1,331)	($11,392)	($146,414)	**($1,317,631)**
2016	Sept	($245,134)	($331,798)	($134,354)	($2,994)	($44,076)	($29)	($742)	($17,023)	($76,220)	**($852,370)**
2016	Aug	($343,215)	($443,399)	($92,826)	($6,579)	($24,522)	$220	($1,669)	($194,464)	($95,262)	**($1,201,717)**
2016	July	($115,657)	($404,628)	($156,575)	($890)	($45,004)	($361)	($245)	($42,554)	($132,797)	**($898,712)**
2016	June	$0	($36)	($178)	$0	($3)	$0	$0	($194,464)	($8)	**($194,689)**
2016	May	($40)	($15)	($14)	$0	($1)	$0	$0	($42,554)	($4)	**($42,629)**
2016	April	($75)	$0	($42)	($15)	($7)	$0	$0	$0	($11)	**($150)**
2016	March	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
2016	February	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
2016	January	($553)	($500)	($1,998)	($145)	($173)	$0	$0	$0	$0	**($3,370)**
2015	Dec	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
2015	Nov	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
										20-Month Total	($13,353,526)
										20-Month Average	($667,676)

Table 1- Represents the exact dollar amount of funds recorded in the system for the period beginning Nov 2015-June 28, 2017. The month of December 2015 is highlighted in red to signify missing data from the data set received on June 28, 2017. Therefore, if any monies were collected during the month of Dec 2015, the monthly average will change. The amounts in the table above should be the same amounts deposited in the operating account for each period identified. An analysis of the monthly deposit totals should be reviewed and compared with the data above to identify any discrepancies.

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Revenue Analysis
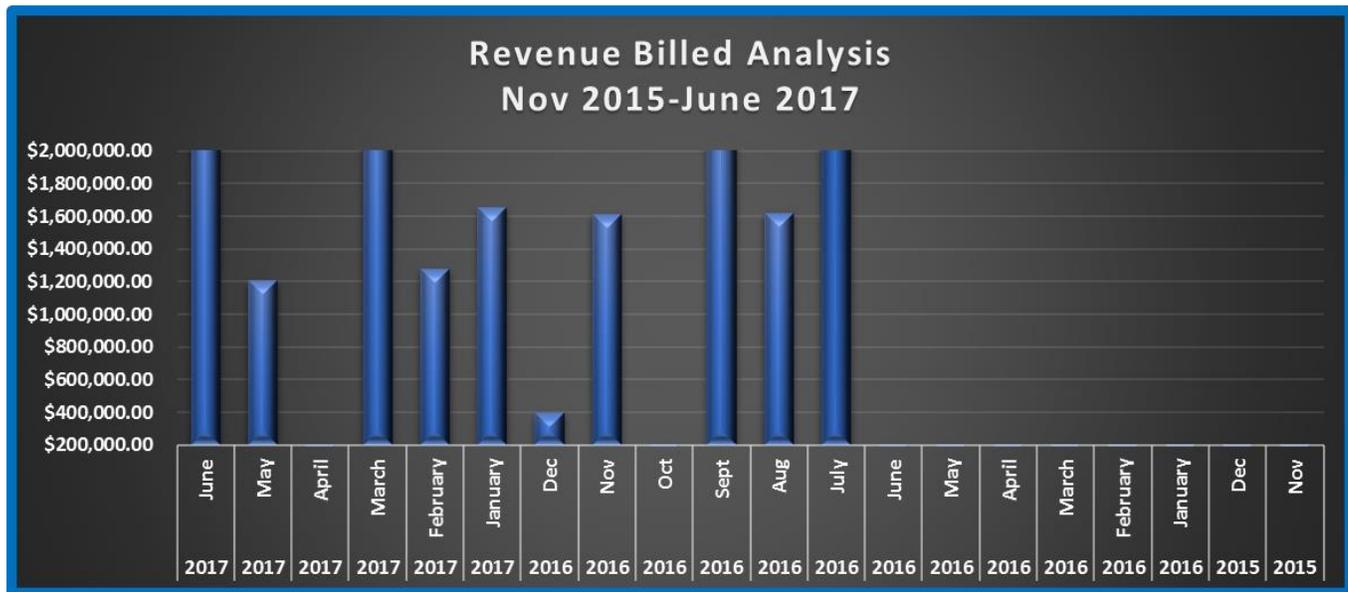
Revenue -The graph above reflects the total amount of charges (Revenue) derived from the data set received on June 28, 2017. The source of the data is from the report labeled "Utility Charges". The data shows that financial trouble began on or before November 2015 as little to no revenue was recorded. The month of November 2015 has zero monies recorded as revenue which indicates no billings were processed. The utility charge report was also missing data for the month of December 2015 altogether. From January 2016-April 2016, less than $1K was recorded as revenue with approximately $11K recorded for the month of May 2016. In June 2016, the revenue spiked to approximately $1.2 million dollars. Errors began to occur thereafter as the revenue begins to increase with some months exceeding $5 million dollars. The city should review the beginning Accounts Receivable balance prior to November 2015 and the amounts billed each month thereafter to identify any discrepancies.

Detailed Monthly Revenue Analysis

Table 2

Revenue Analysis				
Year	Month	Revenue Billed	Adjustments	Change in Revenue
2017	July	$0.00	($75.30)	N/A
2017	June	$2,577,165.44	($1,084,486.87)	-42%
2017	May	$1,204,163.13	($213,869.51)	-18%
2017	April	$128,295.76	($119,356.11)	-93%
2017	March	$2,643,257.45	($182,070.27)	-7%
2017	February	$1,275,306.80	$19,742,696.73	1548%
2017	January	$1,650,328.32	($373,946.09)	-23%
2016	Dec	$397,016.26	$4,814,584.89	1213%
2016	Nov	$1,611,885.96	($164,046.18)	-10%
2016	Oct	($2,072,062.44)	($11,211,705.19)	541%
2016	Sept	$2,245,172.20	($10,350,929.36)	-461%
2016	Aug	$1,617,865.84	($40,294,059.27)	-2491%
2016	July	$120,735,805.57	($79,466,379.07)	-66%
2016	June	$48,875.02	($4,242,855.27)	-8681%
2016	May	$10,985.57	($127.28)	-1%
2016	April	$240.72	($376.47)	-156%
2016	March	$3,754.27	($1,400.07)	-37%
2016	February	$2,731.88	($7.88)	0%
2016	January	$2,681.43	($94.85)	-4%
2015	Dec	$0.00	$0.00	N/A
2015	Nov	$0.00	($346.17)	N/A
	Sums	$134,083,469.18	($123,148,849.59)	
	Total Revenue	$10,934,619.59		
	20-Month Average	$546,730.98		

Table 2-The detailed transactions further explain the fluctuations proved in the graph showing the monthly revenue. During the month of October 2016 approximately $2.5 million dollars was recorded as a credit against revenue. It is unclear why the charges are reflected as a credit for the entire month as all revenue is originally booked as a debit balance. Payments and adjustments that reduce the Accounts Receivables are recorded as credit balances. There is no way to determine what the actual revenue was for the month unless the total amount billed for all customers is obtained. The percentages included in the table provides a different view of the changes the adjustments will the bottom line.

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Billing Adjustments

    Adjustments-The graph above represents the various adjustments that affect revenue. There are large adjustments that can be contributed to errors for the period reviewed during the adjustments entered for water utility services. During the month of June 2016, the total amount adjusted off was approximately $4.2 million dollars followed by nearly $80 million dollars adjusted off in July 2016. This large amount appears to be adjusted off revenue for the total months in question. The city will need to request detailed explanation and documentation of the adjustments to verify if the accounts were adjusted accurately. In February 2017, the data shows nearly $20 million dollars was added to revenue during the month. The source of the data was derived from the report labeled "Utility Charge Report" received on June 28, 2017. **Data was present for the month of July 2017 before the month began which signals another problem with the report configurations in the system.**

Positive Adjustment Details

Table 3

Date	Source	Ref. No.	PO No.	Period	Description	Amount
8/29/2016	UT 1	SW-CI		16-Aug	SEWER ADJUST OFF COMMERCI00000	$9,539,544.02
8/19/2016	UT 1	SW-RI		Aug-16	SEWER ADJUST OFF RESIDENT00000	$9,501,219.75
7/8/2016	UT 1	SW-RI		Jul-16	SEWER ADJUST OFF RESIDENT00000	$9,495,933.00
8/19/2016	UT 1	SW-RI		Aug-16	SEWER ADJUST OFF RESIDENT00000	$9,495,933.00
8/19/2016	UT 1	SW-RI		Aug-16	SEWER ADJUST OFF RESIDENT00000	$9,149,010.76
7/8/2016	UT 1	SW-RI		Jul-16	SEWER ADJUST OFF RESIDENT00000	$9,013,472.27
8/3/2016	UT 1	SW-RI		Jul-16	SEWER ADJUST OFF RESIDENT00000	$9,013,472.27
7/6/2016	UT 1	SW-CI		16-Jul	SEWER ADJUST OFF COMMERCI00000	$7,358,952.06
7/7/2016	UT 1	WA-RI		Jul-16	WATER ADJUST OFF RESIDENT00000	$7,311,861.56
9/28/2016	UT 1	WA-CI		16-Sep	WATER ADJUST OFF COMMERCI00000	$7,130,253.74
7/7/2016	UT 1	WA-CI		16-Jul	WATER ADJUST OFF COMMERCI00000	$6,944,664.02
8/19/2016	UT 1	WA-CI		16-Aug	WATER ADJUST OFF COMMERCI00000	$6,471,356.78
7/7/2016	UT 1	SW-CI		16-Jul	SEWER ADJUST OFF COMMERCI00000	$5,936,892.66
9/28/2016	UT 1	SW-CI		16-Sep	SEWER ADJUST OFF COMMERCI00000	$5,741,606.42
7/7/2016	UT 1	SW-CI		16-Jul	SEWER ADJUST OFF COMMERCI00000	$5,722,730.33
7/8/2016	UT 1	SW-CI		16-Jul	SEWER ADJUST OFF COMMERCI00000	$5,697,659.75
7/7/2016	UT 1	WA-CI		16-Jul	WATER ADJUST OFF COMMERCI00000	$4,569,173.85
9/28/2016	UT 1	WA-CI		16-Sep	WATER ADJUST OFF COMMERCI00000	$4,260,507.48
7/8/2016	UT 1	WA-RI		Jul-16	WATER ADJUST OFF RESIDENT00000	$4,194,235.00
7/8/2016	UT 1	WA-RI		Jul-16	WATER ADJUST OFF RESIDENT00000	$3,981,214.85
8/19/2016	UT 1	SW-CI		16-Aug	SEWER ADJUST OFF COMMERCI00000	$3,547,436.67
7/8/2016	UT 1	WA-RI		Jul-16	WATER ADJUST OFF RESIDENT00000	$3,203,655.12
9/28/2016	UT 1	SW-CI		16-Sep	SEWER ADJUST OFF COMMERCI00000	$2,870,803.21
7/7/2016	UT 1	WA-CI		16-Jul	WATER ADJUST OFF COMMERCI00000	$2,622,101.70
7/8/2016	UT 1	SW-CI		16-Jul	SEWER ADJUST OFF COMMERCI00000	$2,379,200.16
7/7/2016	UT 1	SW-CI		16-Jul	SEWER ADJUST OFF COMMERCI00000	$1,864,612.86
7/8/2016	UT 1	SW-CI		16-Jul	SEWER ADJUST OFF COMMERCI00000	$1,830,095.26
7/7/2016	UT 1	SW-RI		Jul-16	SEWER ADJUST OFF RESIDENT00000	$1,344,255.28
7/8/2016	UT 1	WA-CI		16-Jul	WATER ADJUST OFF COMMERCI00000	$1,305,862.59
7/8/2016	UT 1	WA-CI		16-Jul	WATER ADJUST OFF COMMERCI00000	$1,050,882.56
7/6/2016	UT 1	WA-CI		16-Jul	WATER ADJUST OFF COMMERCI00000	$987,362.62
8/3/2016	UT 1	WA-RI		Jul-16	WATER ADJUST OFF RESIDENT00000	$985,939.33
8/19/2016	UT 1	WA-RI		Aug-16	WATER ADJUST OFF RESIDENT00000	$863,870.00
7/8/2016	UT 1	WA-CI		16-Jul	WATER ADJUST OFF COMMERCI00000	$808,345.06
7/7/2016	UT 1	SW-CI		16-Jul	SEWER ADJUST OFF COMMERCI00000	$725,339.33
8/19/2016	UT 1	WA-RI		Aug-16	WATER ADJUST OFF RESIDENT00000	$501,607.50
8/19/2016	UT 1	WA-RI		Aug-16	WATER ADJUST OFF RESIDENT00000	$498,381.50
7/7/2016	UT 1	SW-RI		Jul-16	SEWER ADJUST OFF RESIDENT00000	$482,672.81
7/7/2016	UT 1	SW-CI		16-Jul	SEWER ADJUST OFF COMMERCI00000	$482,672.81
8/29/2016	UT 1	WA-CI		16-Aug	WATER ADJUST OFF COMMERCI00000	$469,824.15
10/18/2016	UT 1	SW-CI		16-Oct	SEWER ADJUST OFF COMMERCI00000	$441,682.46
7/7/2016	UT 1	WA-CI		16-Jul	WATER ADJUST OFF COMMERCI00000	$320,378.43
9/22/2016	UT 1	WA-RI		Sep-16	WATER ADJUST OFF RESIDENT00000	$263,678.76
7/7/2016	UT 1	WA-RI		Jul-16	WATER ADJUST OFF RESIDENT00000	$213,192.08
7/7/2016	UT 1	WA-CI		16-Jul	WATER ADJUST OFF COMMERCI00000	$213,192.08
10/28/2016	UT 1	SW-CI		16-Oct	SEWER ADJUST OFF COMMERCI00000	$203,527.24
10/18/2016	UT 1	WA-CI		16-Oct	WATER ADJUST OFF COMMERCI00000	$195,087.62
11/8/2016	UT 1	SW-RI		Feb-17	SEWER ADJUST OFF RESIDENT00000	$173,919.59
7/8/2016	UT 1	SW-CI		16-Jul	SEWER ADJUST OFF COMMERCI00000	$122,527.47
8/18/2016	UT 1	SW-CI		16-Aug	SEWER ADJUST OFF COMMERCI00000	$109,692.12

Table 3- represent a sample of the positive adjustments recorded in the system. These amounts were flagged because they were extremely unusual and produced skewed results in the analysis when trying to determine what the actual revenue month over month.

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Credit Adjustment Details

Table 4

11/18/2016	UT 1	WA+CI		17-Mar	WATER ADJUST ON COMMERCIA00000	($10,085.45)
11/30/2016	UT 1	WA+CI		16-Nov	WATER ADJUST ON COMMERCIA00000	($10,085.46)
10/21/2016	UT 1	WA+CI		16-Oct	WATER ADJUST ON COMMERCIA00000	($10,110.00)
9/29/2016	UT 1	SW+RI		Sep-16	SEWER ADJUST ON RESIDENTI00000	($10,353.40)
7/11/2016	UT 1	WA+RI		Jul-16	WATER ADJUST ON RESIDENTI00000	($11,031.03)
1/18/2017	UT 1	WA+CI		17-Mar	WATER ADJUST ON COMMERCIA00000	($11,266.39)
2/18/2017	UT 1	WA+CI		17-Mar	WATER ADJUST ON COMMERCIA00000	($11,473.91)
8/19/2016	UT 1	WA+CI		16-Aug	WATER ADJUST ON COMMERCIA00000	($11,961.01)
12/18/2016	UT 1	WA+CI		17-Mar	WATER ADJUST ON COMMERCIA00000	($12,790.78)
9/22/2016	UT 1	WA+CI		16-Sep	WATER ADJUST ON COMMERCIA00000	($14,023.11)
4/18/2017	UT 1	WA+CI		17-Apr	WATER ADJUST ON COMMERCIA00000	($14,486.07)
7/8/2016	UT 1	SW+CI		16-Jul	SEWER ADJUST ON COMMERCIA00000	($14,591.89)
11/30/2016	UT 1	SW+CI		16-Nov	SEWER ADJUST ON COMMERCIA00000	($15,153.29)
7/11/2016	UT 1	SW+CI		16-Aug	SEWER ADJUST ON COMMERCIA00000	($15,801.41)
7/14/2016	UT 1	WA+CI		16-Aug	WATER ADJUST ON COMMERCIA00000	($16,802.34)
11/29/2016	UT 1	WA+RI		Nov-16	WATER ADJUST ON RESIDENTI00000	($17,286.40)
7/11/2016	UT 1	WA+RI		Jul-16	WATER ADJUST ON RESIDENTI00000	($18,391.68)
6/14/2016	UT 1	WA+CI		16-Aug	WATER ADJUST ON COMMERCIA00000	($20,078.69)
7/11/2016	UT 1	WA+RI		Jul-16	WATER ADJUST ON RESIDENTI00000	($22,173.06)
7/11/2016	UT 1	SW+RI		Jul-16	SEWER ADJUST ON RESIDENTI00000	($24,263.56)
11/29/2016	UT 1	SW+RI		Nov-16	SEWER ADJUST ON RESIDENTI00000	($39,149.60)
7/11/2016	UT 1	SW+RI		Jul-16	SEWER ADJUST ON RESIDENTI00000	($41,665.60)
7/11/2016	UT 1	SW+RI		Jul-16	SEWER ADJUST ON RESIDENTI00000	($50,222.76)
8/18/2016	UT 1	WA+CI		16-Aug	WATER ADJUST ON COMMERCIA00000	($72,451.60)
7/11/2016	UT 1	WA+CI		16-Jul	WATER ADJUST ON COMMERCIA00000	($172,892.44)
7/7/2016	UT 1	WA+RI		Jul-16	WATER ADJUST ON RESIDENTI00000	($213,192.08)
12/12/2016	UT 1	WA+CI		16-Dec	WATER ADJUST ON COMMERCIA00000	($325,912.63)
12/12/2016	UT 1	WA+CI		16-Dec	WATER ADJUST ON COMMERCIA00000	($325,912.63)
12/12/2016	UT 1	WA+CI		16-Dec	WATER ADJUST ON COMMERCIA00000	($326,028.50)
7/11/2016	UT 1	SW+CI		16-Jul	SEWER ADJUST ON COMMERCIA00000	($372,856.67)
7/7/2016	UT 1	SW+RI		Jul-16	SEWER ADJUST ON RESIDENTI00000	($482,672.81)
7/8/2016	UT 1	WA+RI		Jul-16	WATER ADJUST ON RESIDENTI00000	($498,381.50)
8/19/2016	UT 1	WA+RI		Aug-16	WATER ADJUST ON RESIDENTI00000	($498,381.50)
12/12/2016	UT 1	SW+CI		16-Dec	SEWER ADJUST ON COMMERCIA00000	($737,867.27)
12/12/2016	UT 1	SW+CI		16-Dec	SEWER ADJUST ON COMMERCIA00000	($737,867.27)
12/12/2016	UT 1	SW+CI		16-Dec	SEWER ADJUST ON COMMERCIA00000	($738,130.12)
7/8/2016	UT 1	WA+RI		Jul-16	WATER ADJUST ON RESIDENTI00000	($985,939.33)
9/28/2016	UT 1	SW+CI		16-Sep	SEWER ADJUST ON COMMERCIA00000	($1,483,212.84)
7/7/2016	UT 1	WA+CI		16-Jul	WATER ADJUST ON COMMERCIA00000	($1,788,262.56)
7/6/2016	UT 1	SW+CI		16-Jul	SEWER ADJUST ON COMMERCIA00000	($5,123,559.00)
9/28/2016	UT 1	WA+CI		16-Sep	WATER ADJUST ON COMMERCIA00000	($8,521,014.96)
7/8/2016	UT 1	SW+RI		Jul-16	SEWER ADJUST ON RESIDENTI00000	($9,013,472.27)
7/8/2016	UT 1	SW+RI		Jul-16	SEWER ADJUST ON RESIDENTI00000	($9,495,933.00)
8/19/2016	UT 1	SW+RI		Aug-16	SEWER ADJUST ON RESIDENTI00000	($9,495,933.00)
2/20/2017	UT 1	SW+CI		17-Feb	SEWER ADJUST ON COMMERCIA00000	($10,000,000.00)
2/20/2017	UT 1	WA+CI		17-Feb	WATER ADJUST ON COMMERCIA00000	($10,000,000.00)

Table 4- represents a sample of the negative adjustments to water & sewer amounts billed. The larger adjustments provide a snapshot of when these errors began. As you can see, nearly $60 Million dollars was entered in the system. The table above doesn't reflect all the adjustments, just the ones that were extremely high and were flagged for potential errors.

Account Receivables
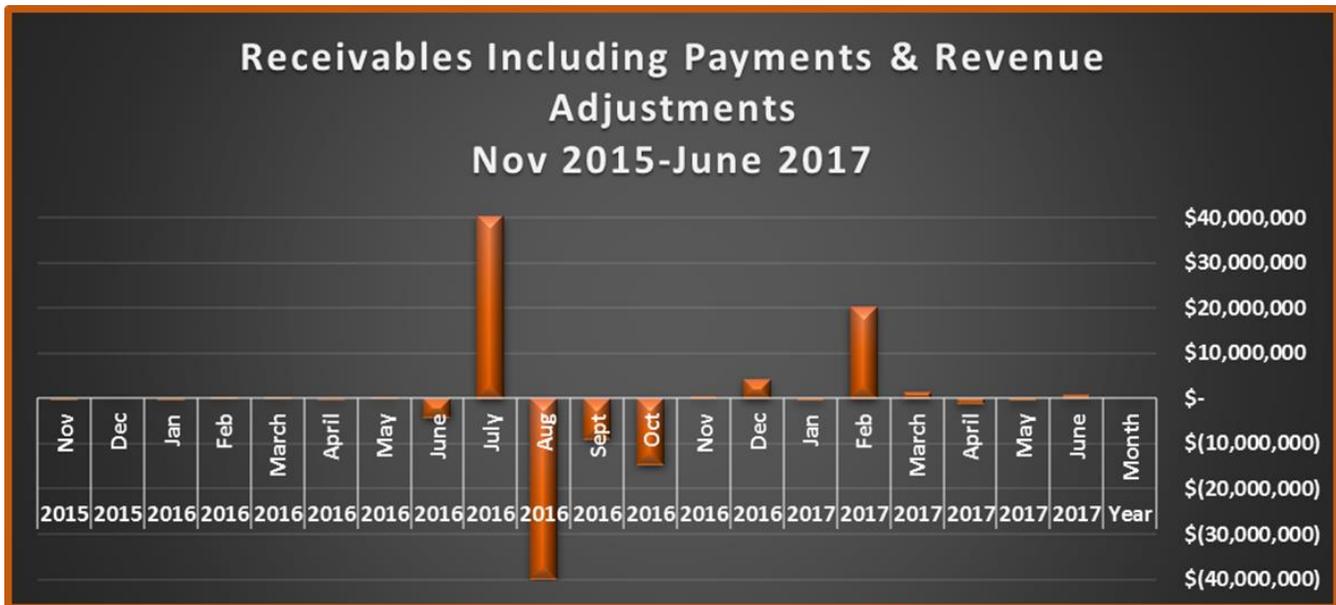
Net Receivables-provides a snapshot of the net receivables (including payments & adjustments). This graph represents the state of the receivables after all payments and adjustments are considered. During the month of June 2016 -October 2016 errors combined with large billing adjustments reduced & increased the revenue for the month. These adjustments skew the total revenue generated for the 20-month period and the revenue could be overstated by millions of dollars. The corrected transactions were not completely reversed in the system in a timely manner which makes it difficult to accurately measure the collection rates month over month when monitoring the operations.

Net Accounts Receivables Including Payments & Adjustments

Table 5

Net Accounts Receivables Including Payments & Adjustments										
Year	Month	Water	Sewer	Refuse	Admin	Taxes	Penalty	Interest	Special Chg	Stormwater	Total
2017	July	($13.64)	($30.94)	($28.00)	$0.00	($2.72)	$0.00	$0.00	$0.00	$0.00	($75)
2017	June	$294,299.22	$324,132.03	$72,882.98	$2,895.49	$10,202.80	($485.70)	($912.28)	($3,760.29)	$46,876.72	$746,131
2017	May	($229,878.43)	($167,289.97)	($3,382.37)	($2,190.86)	$3,764.14	($128.12)	($679.98)	($1,148.72)	($46,511.14)	($447,445)
2017	April	($162,143.54)	($543,240.89)	($195,648.41)	($2,234.20)	($50,094.75)	$2,767.80	($956.24)	$4,569.42	($118,875.34)	($1,065,856)
2017	March	$343,378.23	$707,846.47	$216,272.47	$2,808.72	$27,016.10	($341.94)	($1,106.57)	($45,422.38)	$125,294.03	$1,375,745
2017	Feb	$10,001,086.20	$10,121,325.60	$86,140.59	$1,346.11	$25,569.29	($200.49)	($1,202.00)	$1,282.18	$44,278.24	$20,279,626
2017	Jan	($22,655.24)	$111,534.64	$23,082.27	($922.23)	$2,318.36	$202.47	($290.84)	($536,951.45)	($34,578.09)	($458,260)
2016	Dec	$1,224,491.41	$2,774,957.87	($176,832.55)	($2,472.23)	($26,341.92)	$288.94	($270.62)	$537,111.57	($87,945.35)	$4,242,987
2016	Nov	$137,645.23	$270,817.34	$37,167.60	($150.95)	($64,619.14)	($1,531.81)	($486.96)	$3,017.20	$9,881.15	$391,740
2016	Oct	($6,505,490.27)	($8,069,288.47)	$37,891.45	$5,124.57	($47,392.55)	$222.92	($1,400.19)	$274.97	($21,341.48)	($14,601,399)
2016	Sept	($2,573,264.79)	($6,492,880.70)	$49,512.92	($3,020.92)	($4,063.14)	($62.64)	($905.18)	$1,054.37	$65,503.40	($8,958,127)
2016	Aug	($8,290,795.77)	($31,627,337.31)	$33,160.05	($3,279.24)	$6,625.71	$113.15	($2,277.46)	($1,263.44)	$7,144.26	($39,877,910)
2016	July	$6,433,700.59	$33,973,881.46	($12,586.63)	($940.12)	($10,099.93)	($471.69)	($653.75)	($1,684.44)	($10,430.53)	$40,370,715
2016	June	($1,285,134.00)	($2,909,569.50)	($136.00)	($25.00)	$7.05	$0.00	$0.00	$0.00	$652.20	($4,194,205)
2016	May	$10,769.01	$7.00	$0.00	$0.00	$0.91	$0.00	$0.00	$0.00	$6.37	$10,783
2016	April	($142.15)	($141.36)	$14.00	($15.12)	($4.87)	$0.00	$0.00	$0.00	$3.75	($286)
2016	March	$733.32	$1,616.99	($152.00)	$15.00	$163.39	$0.00	$0.00	$0.00	($22.50)	$2,354
2016	Feb	$401.66	$911.21	$0.00	$0.00	$2.25	$0.00	$0.00	$0.00	$1,408.88	$2,724
2016	Jan	($113.29)	$497.35	($1,078.33)	($144.95)	($92.28)	$0.00	$0.00	$0.00	$30.58	($901)
2015	Dec	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
2015	Nov	($59.66)	($135.38)	$0.00	$0.00	($2.25)	$0.00	$0.00	$0.00	($148.88)	($346)
									20-Month Total		**($2,182,005.83)**
									Monthly Average		**($109,100.29)**

Table 5-shows the net amount of the revenue after all adjustments and payments were posted. The amounts in the column labeled "Total" is the net amount that was added or subtracted from the receivables each month. While it is noted that practically no revenue is recorded from Nov 2015-May 2016, there is an additional $4 million was added to the receivables during the month of June 2016.

The $4 million appears to be catch up from the previous consecutive months of low billing activity. Then in the month of July 2016, $40 million was added to the receivables. All but $4,928 was credited from Accounts Receivables in the month of Aug 2016 with additional $23.5 million dollars credited off during September & October 2016. Another $24.5 million dollars was added to the receivables from Dec 2016-Feb 2017. To determine the true revenue, the city will need to complete a detailed audit of the financials starting with the AR balance before November 2015. The additional revenue should be compared to the amount of revenue generated from billing record processed each month. same period.

Aging Report

The city of Petersburg has customer records with balances remaining outstanding in the 30/60/90-day category. As of 06/22/17 the remaining outstanding receivables show a total of $4,583,338.32 with $1,880,743.43 in the current column. A more detailed look at the outstanding balances are summarized in the table below to provide an idea of the types of account balances remain.

TOTAL	CURRENT	OVER 30	OVER 60	OVER 90
$ 4,583,338.32	$1,880,743.43	$419,305.78	$420,528.90	$1,862,685.21

Aging Report Summary

Table 6

Account Receivables	# of Accounts	TOTAL	CURRENT	OVER 30	OVER 60	OVER 90
Balance >$50 over 90 days	333	$597,858.09	$67,298.95	$53,919.06	$81,818.59	$394,821.49
Balance >$100 over 90 days	280	$580,782.28	$62,209.74	$50,014.25	$77,458.12	$391,100.17
Balance >$500 over 90 days	128	$490,494.60	$44,483.32	$34,972.97	$58,326.28	$352,712.03
Balance >$1,000 over 90 days	55	$417,679.83	$37,605.31	$29,173.90	$49,921.49	$300,979.13
Balance >$2,000 over 90 days	21	$358,579.70	$33,165.62	$24,964.05	$44,988.65	$255,461.38
Balance >$5,000 over 90 days	10	$307,148.23	$25,295.70	$20,591.28	$39,864.49	$221,396.76
Balance >$10,000 over 90 days	5	$249,567.70	$18,185.61	$14,951.19	$31,980.50	$184,450.40
Balance >$20,000 over 90 days	3	$205,542.99	$14,756.39	$12,087.83	$27,993.65	$150,705.12
Balance >$40,000 over 90 days	2	$157,710.41	$14,756.39	$12,087.83	$13,507.58	$117,358.61

Table 6- provides a detailed summary to show the state of the accounts with an outstanding balance include the number of accounts in each category. An additional column should be added to the original report out of the system for accounts with debit balances >120 days. **The amounts in the column >120 days will more than likely represent the amounts that need to be written off or disconnected for non-payment if the account remains active.** Additionally, columns should be added to classify the account status which identifies if the account is active or inactive.

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Detailed Aging Report

Sample Data

CUST#	NAME		SERV ADDRESS	TOTAL	CURRENT	OVER 30	OVER 60	OVER 90	START DT	TERM DT
1416660	PROPERTY MANAGEMENT (F	MD)	319SCRATER RD	$ 5,122.22	$ 1,083.54	$ 1,009.67	$ 1,009.67	$ 2,019.34	10/17/1997	
1532600	FINLEY THOMAS		532 WINDHAM ST	$ 3,028.00	$ 51.28	$ 652.93	$ 954.98	$ 1,368.81	10/17/1997	
1544900	FARNELL JEAN R		2139 ARMISTEAD A	$ 1,404.19	$ 148.27	$ 47.40	$ 47.40	$ 1,161.12	10/17/1997	
1540605	RICHARDSON HERBERT		2520 COUNTY DR	$ 1,718.30	$ 121.67	$ 135.65	$ 123.60	$ 1,337.38	10/17/1997	
2004450	PRECON		SPERRY	$ 5,205.61	$ 2,739.62	$ -	$ -	$ 2,465.99	10/17/1997	
2005900	DIR. OF ENGR. & LOGIST	ICS	FORT LEE	$ 47,832.58	$ -	$ -	$14,486.07	$ 33,346.51	10/17/1997	
3005100	PROPERTY MANAGEMENT (F	MD)	LEE AVE	$ 3,653.36	$ 283.09	$ 259.21	$ 259.21	$ 2,851.85	10/17/1997	
3120710	PROPERTY MANAGEMENT (F	MD)	HALIFAX ST	$ 2,522.23	$ 202.09	$ 178.21	$ 178.21	$ 1,963.72	10/17/1997	
3132110	BETHESDA CHURCH **PP		459 HARDING ST	$ 3,540.77	$ 104.22	$ 96.38	$ 96.59	$ 3,243.58	10/17/1997	
3230304	BUTTS CREASY L		724 STARKE ST	$ 1,239.91	$ 55.39	$ 51.32	$ 63.47	$ 1,069.73	10/17/1997	
3300160	PROPERTY MANAGEMENT (F	MD)	800 ARLINGTON S	$ 3,488.32	$ 203.11	$ 178.96	$ 180.45	$ 2,925.80	10/17/1997	
3817200	LAW C W		1410 GRANT AVE	$ 2,283.11	$ 152.62	$ 114.65	$ 151.75	$ 1,864.09	10/17/1997	
3902000	ROBERTSON J C		1017 BOLLING ST	$ 1,586.74	$ 50.57	$ 47.40	$ 47.40	$ 1,441.37	10/17/1997	
3903100	DILLARD NAOMI		1108 BOLLING ST	$ 1,469.44	$ 137.63	$ 93.75	$ 132.98	$ 1,105.08	10/17/1997	
3911305	MASON YVETTE		915 HIGH PEARL	$ 1,371.41	$ 58.60	$ 110.35	$ 59.44	$ 1,143.02	10/17/1997	
3928701	LYONS CHRISTINE		506 ST LUKE ST	$ 1,701.51	$ 50.57	$ 47.40	$ 47.40	$ 1,556.14	10/17/1997	
3937302	BOOKER SARAH M		404 ST MARK ST	$ 1,882.46	$ 50.57	$ 47.40	$ 97.40	$ 1,687.09	10/17/1997	
3937700	DORTCH EVA MISS		413 ST MARK ST	$ 1,414.28	$ 50.57	$ 97.40	$ 47.40	$ 1,218.91	10/17/1997	
3939905	ARMSTRONG ROBERT		608 ST MARK ST	$ 1,275.72	$ 50.57	$ 47.40	$ 47.40	$ 1,130.35	10/17/1997	
5028705	TAYLOR DEBORAH Y		376 NORTH BLVD	$ 1,809.78	$ 90.25	$ 116.03	$ 78.40	$ 1,525.10	10/17/1997	
5035902	BOONE CHERI J		1814 POWHATAN AV	$ 1,627.68	$ 50.57	$ 47.40	$ 47.40	$ 1,482.31	10/17/1997	
5238600	RICARDI LTD**PP		1945SSYCAMORE	$ 2,770.63	$ 78.70	$ 70.87	$ 241.73	$ 2,379.33	10/17/1997	
5601902	WHITE SHARON		505SAZALEA RD	$ 1,388.13	$ 69.93	$ 54.02	$ 66.89	$ 1,197.29	10/17/1997	
5602400	HUNT RICHARD		529SAZALEA RD	$ 1,398.04	$ 105.56	$ 85.11	$ 64.24	$ 1,143.13	10/17/1997	
5603050	STEWART GEORGE S JR		566SAZALEA RD	$ 1,158.26	$ 52.98	$ 48.47	$ 49.09	$ 1,007.72	10/17/1997	
5605001	CONAWAY HARRY B.		1680SCRATER RD	$ 1,245.59	$ 75.74	$ 55.82	$ 66.89	$ 1,047.14	10/17/1997	
5608803	HILL SYMBIOUS		479 FOREST LANE	$ 1,320.50	$ 68.49	$ 59.90	$ 70.30	$ 1,121.81	10/17/1997	
5631800	GEORGETOWN INVESTMENT		JOHNSON RD	$ 9,507.28	$ 1,070.19	$ 1,061.62	$ 1,062.03	$ 6,313.44	10/17/1997	
5631900	GEORGETOWN INVESTMENT		1 JOHNSON RD	$ 5,879.32	$ 389.12	$ 212.08	$ 299.60	$ 4,978.52	10/17/1997	
5632100	GEORGETOWN INVESTMENT		120 JOHNSON RD	$ 7,086.19	$ 1,443.54	$ 1,527.96	$ 1,566.39	$ 2,548.30	10/17/1997	
5632200	GEORGETOWN INVESTMENT		11 JOHNSON RD	$ 8,452.12	$ 703.56	$ 468.60	$ 502.56	$ 6,777.40	10/17/1997	
5632900	GEORGETOWN INVESTMENT		125 JOHNSON RD	$ 15,639.99	$ 2,047.36	$ 1,837.08	$ 2,711.24	$ 9,044.31	10/17/1997	
5633000	GEORGETOWN INVESTMENT		43 JOHNSON RD	$ 5,577.48	$ 1,076.00	$ 563.84	$ 852.16	$ 3,085.48	10/17/1997	
5633300	GEORGETOWN INVESTMENT		2 JOHNSON RD	$ 3,691.68	$ 732.96	$ 513.92	$ 704.16	$ 1,740.64	10/17/1997	
5633700	GEORGETOWN INVESTMENT		115 JOHNSON RD	$ 3,271.16	$ 779.60	$ 548.00	$ 704.80	$ 1,238.76	10/17/1997	
5633800	GEORGETOWN INVESTMENT		30 JOHNSON RD	$ 5,970.60	$ 362.40	$ 288.32	$ 362.96	$ 4,956.92	10/17/1997	
5634200	GEORGETOWN INVESTMENT		34 JOHNSON RD	$ 26,926.15	$ 2,417.64	$ 1,973.88	$ 3,095.52	$ 19,439.11	10/17/1997	
5634800	GEORGETOWN INVESTMENT		101 JOHNSON RD	$ 60,145.63	$ 7,175.99	$ 5,996.83	$ 6,066.78	$ 40,906.03	10/17/1997	
5634900	GEORGETOWN INVESTMENT		102 JOHNSON RD	$ 14,011.96	$ 1,845.36	$ 1,327.68	$ 2,310.12	$ 8,528.80	10/17/1997	
5635000	GEORGETOWN INVESTMENT		130 JOHNSON RD	$ 97,564.78	$ 7,580.40	$ 6,091.00	$ 7,440.80	$ 76,452.58	10/17/1997	
5635100	GEORGETOWN INVESTMENT		154 JOHNSON RD	$ 17,098.56	$ 1,011.58	$ 889.48	$ 891.33	$ 14,306.17	10/17/1997	
5635200	GEORGETOWN INVESTMENT		140 JOHNSON RD	$ 9,969.18	$ 1,443.62	$ 945.11	$ 1,298.04	$ 6,282.41	10/17/1997	
5653805	MALLETTE HAROLD L-RUTH	W	3301 LANCELOT RD	$ 3,136.97	$ 106.58	$ 165.48	$ 255.40	$ 2,609.51	10/17/1997	
5744902	LEONARD KARREN A		2551 GLENDALE AV	$ 1,223.83	$ 55.75	$ 50.58	$ 55.82	$ 1,061.68	10/17/1997	
5746000	OKAMOTO NANNIE L		2587 GLENDALE AV	$ 1,499.68	$ 207.75	$ 108.67	$ 181.17	$ 1,002.09	10/17/1997	
5770207	JONES ANITA		3351 NORMANDY DR	$ 1,298.20	$ 90.81	$ 82.88	$ 59.69	$ 1,064.82	10/17/1997	
5900150	PROPERTY MANAGEMENT(C(	OPER FD)	BANISTER RD	$ 2,520.62	$ 202.09	$ 178.21	$ 178.21	$ 1,962.11	10/17/1997	
7103402	GILLIAM ODELL		940 COMMERCE ST	$ 1,632.60	$ 50.57	$ 47.40	$ 47.40	$ 1,487.23	10/17/1997	
7218402	THE GLORY OF GOD MINIS	TRY	1001WHIGH ST	$ 1,580.57	$ 99.81	$ 96.69	$ 46.69	$ 1,337.38	10/17/1997	
7223301	WILKERSON RODERICK A		1209WHIGH ST	$ 2,037.44	$ 50.57	$ 47.40	$ 47.40	$ 1,892.07	10/17/1997	
7224000	BONNER C E & THELMA W		1221WHIGH ST	$ 1,575.91	$ 62.20	$ 51.43	$ 63.89	$ 1,398.39	10/17/1997	
7335800	GRAISE ANNIE		322 LOW ST	$ 1,913.92	$ 126.03	$ 149.29	$ 158.14	$ 1,480.46	10/17/1997	
7439704	DAVIS SHARON S		1814 STUART AVE	$ 1,188.35	$ 50.57	$ 47.40	$ 47.40	$ 1,042.98	10/17/1997	
7500200	MASON S JR		1495 BUSBY DR	$ 1,367.86	$ 117.80	$ 80.53	$ 81.81	$ 1,087.72	10/17/1997	
7664731	RENDER DELORES A		2417 PARKVIEW AV	$ 1,453.03	$ 119.26	$ 69.44	$ 114.22	$ 1,150.11	10/17/1997	
	Count			**$417,679.83**	**$37,605.31**	**$29,173.90**	**$49,921.49**	**$300,979.13**		

Aging Report-The aging report does not contain the account status of whether these accounts are active or inactive. In either event, the utility has many unpaid bills from customers with an outstanding balance greater than 90 days. To completely evaluate the receivables, the aging report should be revised to include the account status and term date to isolate accounts that are subject to be written off. **The aging report can be used to monitor the collection efforts monthly.** Included in the table, is a sample of the accounts that have unpaid balances greater than $1K over 90 days as of 6/22/17.

Financial Summary

The data collected and reviewed was for a 20-month period from Nov of 2015 to June of 2017. During this period, there were errors made surrounding adjustments to revenue processed in the system. Only a small percentage of the adjustments were documented by the Customer Service Supervisor for audit purposes. Efforts to make corrections were swift on the customer side, but unfortunately the incorrect amounts hit the General Ledger and remained incorrect for months. At some point, corrections were made, but the detailed transactions do not clearly reflect that the issues have been resolved.

Below is a status of the requested items prior to finalizing the report. The items were requested on 3 separate occasions. All requested items were not submitted by the utility to complete the final report; therefore, a more thorough analysis could not be obtained for the final report.

Additional Items Requested

- Profit & Loss Statement-**Not received as of July 21, 2017**
- Accounts Receivable Report for the months of June 2016 thru February 2017- The report should include a summary of total revenue billed, collected and adjusted by month. -**Received on June 28, 2017 with discrepancies.**
- Beginning AR balance as of June 2016-**Not received as of July 21, 2017**
- Access to a contact at BAI to obtain some system information -**Not received as of July 21, 2017**
- Aging Report ending May 31, 2017-**Received on 6/22/17 by Janell Sinclair**

Recommendations

Staffing Levels

There is a total of 10 employees that have direct interactions with the customers for payments, billing, new account setup etc. Consolidating the roles of these employees could improve processes, communication and oversight of the utility operation and finances. The Customer Service department (with the addition of the 2 reps from the treasury office) can be **crossed- trained** to handle payments and take incoming calls. **Cross-training allows development opportunities for staff; coverage during absenteeism; and increases the staff's knowledge of the functional area to provide better customer support. Also, this allows the utility to reduce staff employee costs.** In return, the customers will have a better experience when conducting business with the utility monthly. This can be achieved by reviewing the following:

- **Job Descriptions**-Each job description should be reviewed and revised. They should include objective, responsibilities, required skillsets and experience. An in depth look at the current roles may conclude that responsibilities are not properly defined and assigned. The employees job description should be clearly defined and expectations set forth that aligns with the goals of the utility. By doing so, performance gaps are reduced, with increased accountability.

- **Staff Reduction**-Reduce the staff at the treasury office by 2 employees and combine with the current staffing levels for Customer Service. The utility will then have 4 full-time employees to handle the incoming calls, walk-in customers, process mail, and take payments for utility services only. This will allow the remaining treasury department to maintain the Customer Service and payments as it relate to other city business separate from the utility. The new setup could streamline the long lines and provide ease to the customers who are only interested in paying their utility bill. A call-center environment can be created to provide proper coverage of the incoming calls and provide an opportunity to train a backup billing clerk. This will keep all utility billing and payment collections separate from the other entities of the city and improve the customer experience while providing proper oversight of activities related to utility billing.

- **Organization Structure**-To provide proper oversight, the utility billing department should have a supervisor/or lead that reports to the manager to oversee daily operation activities. The manager should have specific duties to oversee all the functions associated with utility billing to include meter reading and report up to the City Manager/or General Manager. The supervisor should be responsible for preparing monthly recaps to be used by the manager to oversee operations. **Suggestion for new Organization Structure on page 29.**

- **Skill Assessment**-Once the evaluation of the job descriptions is completed, an evaluation of the employees technical and soft skills will be needed to ensure proper fit for the position. Key items to review when evaluating the skillset includes knowledge, experience, strengths, weaknesses, attendance, and soft-skills. You must ensure that the employee is the right fit for the job.

Proposed Organization Chart
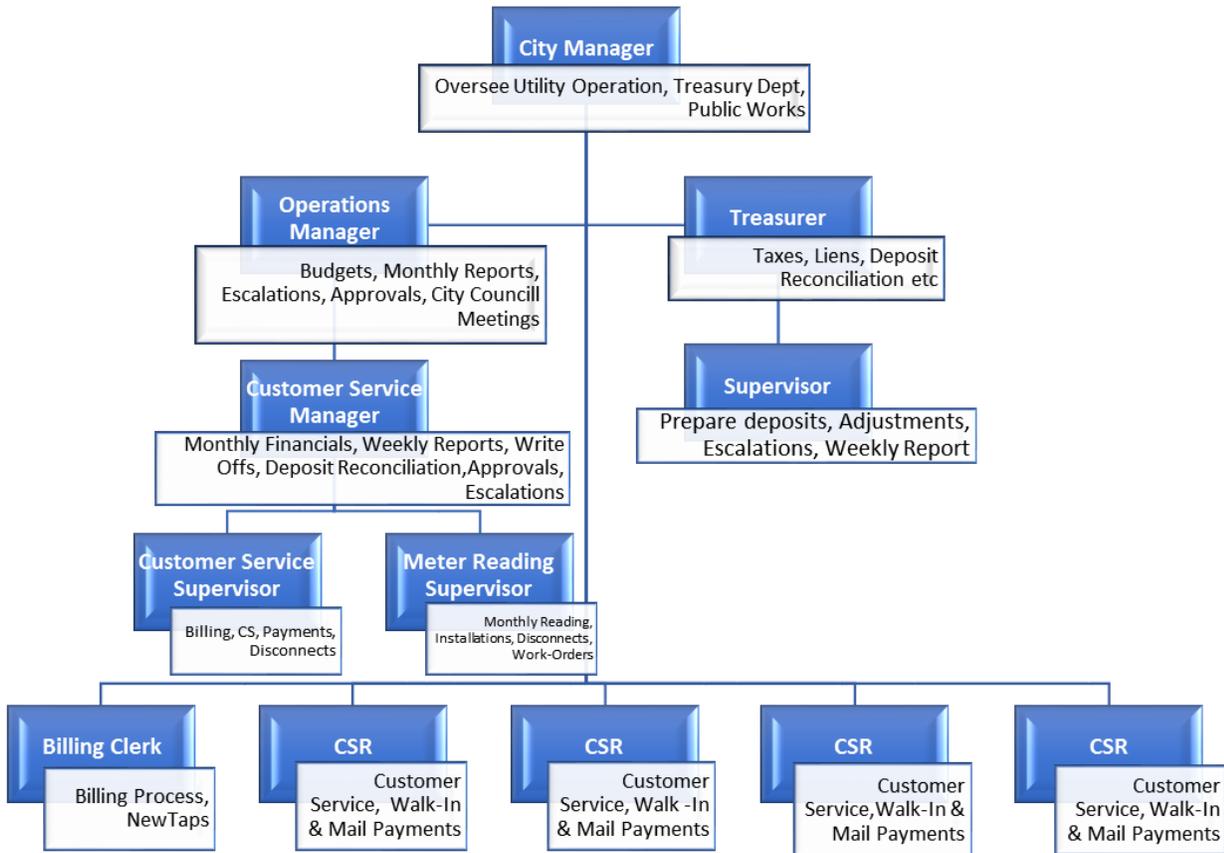
Training

- **On-Boarding**-Short-term, develop an on-boarding/training checklist for each position. Each list should include the systems, processes, training, and contacts a person should make to become orientated in a role. Also, item(s) should have a target duration for completion.
- **Billing System**-Develop a training manual of the various programs within the billing. Each employee should spend time with an experienced employee (s) to learn how to fully utilize the system and all its components within their role. Janell Sinclair can be instrumental in completing this task. The utility should see if BAI has some offsite training classes for Janell Sinclair to be officially trained on all functionality. Ms. Sinclair, can then train all current and new employees on the systems to increase efficiency.
- **Customer Service**-Develop standard CS training for CS and Billing staff. Topics should include standard greetings; providing CS over the phone; how to deal with difficult customers. For example:
  - ➢ While onsite, a CS representative was on the phone with a customer complaining about their high bill. The CS representative replied to the customer "Well don't use the water, don't bathe or drink the water and you won't have a high bill". This was not the way to respond to a customer.

Policy & Procedures

- All policies should be documented and align with the City of Petersburg ordinances. Using that information, develop a policy and procedure manual to run the daily Utility operations. Utilize a standard template for the policies and procedures that includes items such as owner, revisions, dates, approval process if required. All employees should be provided a copy and orientated on the manual to use as a reference.

Technology

The current platform used for utility billing is the same system utilized for the accounting software. Each department may use different programs used for specific tasks that is not made accessible to all employees. There were talks about possibly separating the utility billing and possibly converting to another system. Converting to another system is not recommended until the data is cleaned up in the current billing system. Pursuing a new system will only compound the current problems if the integrity of the data is not addressed. Instead, the utility should look at the current setup and configurations to ensure that the current system is maximized to its full capability and correct any discrepancies. Starting with the items outlined below:

- ➢ Evaluate the latest software version available.
- ➢ Check the programming of how all transactions are handled in the system.
- ➢ Audit the calculation of the system rates.
- ➢ Reporting capabilities including adding various reports programmed to extract pertinent data.

➢ Conduct inventory of current functionality and system capabilities i.e., e-bills and email from the billing system.

➢ Evaluate Monthly/Annual support costs vs product availability.

➢ System Updates

➢ Stability-% of uptime and downtime

➢ Network Security

➢ Adequate system support

➢ User licensing package and limitations

Billing Platform & Functionality

The system should be evaluated and configured to provide the employees with the tools necessary to perform their tasks daily with ease.

➢ Current functionality vs goals of the utility

➢ User security levels that align with current job titles and responsibilities.

➢ User friendly tools for end users.

➢ User access to support whether from IT or the vendor.

➢ Creation of help desk tickets by all users to receive assistance in a timely manner.

➢ Ensure current 3rd-party integrations are configured properly

➢ Install and run CASS certification data validation software to identify and correct invalid mailing addresses.

➢ Ensure users have the proper system modules and licensing to access all functionality of the billing system within their scope of work.

Phone System

To improve the customer service provided to the community, the utility should evaluate the current phone system and services offered by Comcast to ensure the utility is fully utilizing the functionality of the system. Business solution should provide a variety of services included within an office environment. System should allow users with the appropriate security levels to track performance statistics outlined below:

- # of dropped calls
- # of incoming calls
- Wrap time per rep
- Ability to reroute voicemails to email program
- Include call accounting software for playback and training purposes.

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Website

- Responsible party should be assigned to update the website information for incomplete information or changes as it relates to utility billing. Customer should be made aware of vital information that impact the services and/or monthly billing.
    - A campaign push to provide customer with website information to make payments should be done to reduce the number of customers that visit the office.
    - Information about pay by phone should be highly visible to customers on the website and on the bills.
    - Forms should be updated and easily accessible to customers on the website. The least amount of clicks it takes to get the necessary information will likely reduce a phone call to the office.
    - Payment arrangement options should be made available on the web. This is low support cost channel.
    - An email group for customer service complaints should be developed with the appropriate personnel to respond to customer inquiries and complaints in a timely manner.

Meter Reading

- The AS400/ISeries system integration should be evaluated to ensure that the Meter Reader supervisor has the functionality within his scope of work. For example:
- Properly setup the data transfer file to allow the supervisor to perform the upload/download with the click of a button. The system should be configured to transfer updated records to and from the billing system with minimum effort.
- Train the Meter Reading Supervisor to transfer the routes to be read and create the download file for the handhelds without the need for IT to get involved. The Meter Reading supervisor should be properly trained to build routes to be completed, and perform the downloads himself. This will increase productivity and allow the supervisor to assign routes to be read without waiting on the availability of the IT director. Once the reads are back, it will allow the files to be uploaded for the process of the bills sooner. Therefore, providing more time to check the accounts before the billing process is completed.
- An annual meter reading scheduled should be created to ensure the proper number of days between the reading period are between 30-32 days per billing cycle. This schedule should incorporate all weekends and holidays.

Billing Process (Revenue)

A complete step by step billing process should be documented. The process should include control points to consistently identify exceptions and ensure billing accuracy. The process should enable other users to easily follow in the absence of the current billing clerk. The current process should be revised to incorporate the completion of work orders in the system to actively start the billing for new service within 30 days of service activation. Employees will need the appropriate reports to properly check the readings and calculations. Comprehensive reports should be available to the supervisor and manager to provide the proper oversight. Reports from the billing system should be configured to capture the following errors before the billing process is final.

- Exception reports- report that identify the types of errors after initial upload of meter readings and after the bills are posted before printing and mailing. This will allow the utility to reduce adjustments for corrections after the billing process is completed, yet before the incorrect bill reaches the customer.
- Meter Turn overs- meters that reach a million gallons of usage or more
- Negative usage/reverse flow-meters where the flow of water is running backwards.
- High Usage-System calculates the customer's average usage for 6-12 months and determines that the current month's total is above average.
- Low Usage-Consumption that is below the customer's average usage
- Incorrect or missing read dates-identifies missing information from new services.
- Unauthorized Usage-Usage on an inactive account. Often indicates a customer using water without starting service and paying fees, illegal connections from disconnected customers, or a new customer whose service wasn't activated in the system timely.

Write Offs

- A write off policy and process should be defined and documented to include the responsible party. The terms should align with the billing process, disconnect policy, final bill process and collection methods through a third party.
- Proper write off codes should be identified and the system should be configured to record the write off adjustment properly as it relates to the general ledger for accounting purposes. Amounts written off for any period should be clearly defined on a report to include the detailed customer information and totals for each billing code.

Reporting

It is not productive that all report requests go to IT. The vendor or IT should develop comprehensive canned reports via a system menu. Only special reports or of the unusual nature should be submitted to the IT department. Each user should have their own report menu that aligns with the user's scope of work to allow them to perform their jobs efficiently. The system should have email capability to enable users to email directly from the billing system. Also, configure the system to automate reports to automatically send to the users email that is event and date driven. Example reports are listed below:

- Aging Reports-Reports the aged amounts owed by customers who have an account balance broken down by 30/60/90/120 and older. *Should be automate*d.
- Billing Recap-Should contain a comprehensive report that clearly identifies possible errors based on each customer record. The report should contain percentages based on the history of the account that identifies high usage or low usage to trigger a second look or send out for a re-read. The current report doesn't show any such calculations that is used while checking for billing errors to prevent large adjustments after the bills have been posted.
- Work Order Reports with the status of completion to include dates, user, site address, customer name, field comments and name of person completing the work order etc.
- Accounts Receivable report-To provide managers with a summary of all financial transactions completed during the month. The report should include amounts billed, collected, adjusted and

beginning/ending AR balance all in one report by billing charge code, rate class, account status. ***Should be automated at month end***.

- o **Adjustment Report**-Provides the details of all customer accounts that were adjusted during the month for all billing codes. ***Should be automated at month end.***
- o **Monthly Recap**-Report that includes the summary by code for all billing, payment methods, and adjustment codes entered during the month.
- o **Daily Recap**-Report that shows all the payments or adjustments to payments by day that was posted in the billing system. The report should be configured to report detailed customer information and a summary of the totals by transaction.
- o **Meter Age Report**-Used to monitor the age of the meters to determine meters that are possibly not accurately measuring the appropriate amount of water used by the customers per industry standards. Manufacturers provide specs as it relates to how much water that has passed through the meter before the accuracy of the measuring chambers are affected. The specs will also have information related to accuracy per the age of the meter.
- o **Field Service Monthly Report**-A monthly report should be created to report and track the monthly metrics for services performed during the month. ***Services are outlined below:***
  - # Meter change outs
  - # of disconnects assigned
  - # of disconnects performed
  - # of reconnects
  - # of after hour emergency calls
  - # of new service
  - # of final customers
  - # of re-reads during normal read cycle
  - # of errors
  - # of zero consumption meters
  - # of transponder repairs
  - # of illegal connections found during the month
  - # of leaks reported/repaired

A manager should be reviewing all the above reports to ensure that all payment transactions entered in the system balances with cash and bank deposits, a member of finance should be reconciling the general ledger details, and cross-reference with the reports from the billing/payment programs as well the bank statements to ensure everything is in balance. There are several comprehensive reports that are needed to manage the day to day operations that is currently not available to the staff.

Financials

Fee Structure

The utility managers should review additional service fees to ensure the amounts correspond with the past and future rate increases of the utility. The additional fees remain unchanged as the focus has been on the water and sewer rates, but there is a list of fees that are charged for additional services and equipment used. Equipment is charged at an hourly rate for the rental of pumps, backhoes, excavator's, shoring equipment, meter & valve locates, tapping equipment etc. **Also, one common service charge that remains absent is a priority charge usually established for customers that request *same day service*. *Some utilities charge an additional $20-$40 to reconnect customers on the same day.*** The utility provides

this service free of charge. The utility should consider adding a fee to this service because often personnel who respond to these requests are working past normal work hours possibly creating unnecessary overtime.

Payments

The allocation of the customer payment hierarchy should be reviewed by upper management to ensure the setup is in line with the expenditures of the utility. In the example of the hierarchy, water sales were last on the list to receive a portion of the payment collected, yet it's the primary service offering where other charges are based upon water usage. Based on the charge report provided for the period Nov 2015 through June 2017, there are several months where no payments were recorded as received from customers. At a time when collection efforts were not pursued, it is hard to understand why the reports does not show payments recorded in the system for approximately **11K** customers consecutively at any given time.

IMPORTANT NOTE: On May 19, 2017, the IT manger provided a pdf version of the Monthly Utility Charge report in response to the first request for data. The report only contained data for the month of March 2017 through mid-May 2017. Then on June 28, 2017, the same report was received in excel format from the IT Director to include the period of Nov 2015-June 2017. The two reports have totals that vary for the same months recorded in each category. Also, the month of December 2015 was missing from the excel data extract altogether. **To be more specific, here is just one example for the month of March.**

Based on the variances from the two reports, it appears that the system is not handling transactions

					Utility Charge Report Variance						
Report Date	Period	WATER	SEWER	REFUSE	ADM FEE OVERPAY	TAXES	PENALTY	INTEREST	SPECAL CHG	STORMWATER	Total
May-17	**Mar-17**	($174,159.68)	($529,991.66)	($195,036.19)	($3,833.90)	($49,855.70)	$2,783.10	($956.24)	($4,812.79)	($118,882.76)	($1,074,745.82)
Jun-17	**Mar-17**	($254,685.48)	($476,529.81)	($193,228.47)	($3,106.28)	($36,584.87)	($341.94)	($1,104.23)	($9,287.62)	($110,573.35)	($1,085,442.05)
										Variance	(10,696.23)

properly. Either the reports totals are wrong, or someone has made some additional adjustments in which the system isn't handling those transactions properly. The amounts billed, collected, and adjusted should be recorded as it happens during the month and remain the same. Adjustments to the amounts billed and collected should be captured with different codes and reflected on the records in a manner that will provide full transparency. When adjustments are made to prior amounts billed or collected, the amount of the adjustment should be recorded in the same month the adjustment was made, thus previous reports should not be altered. The system should also be able to produce the same results for the same reports when ran month over month to determine the state of the finances at the time the transactions occurred. **It is imperative that the city takes a closer look at the reporting module of the system.**

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Cash Flow

The first step to improve the cash flow is to increase number of times bills go out during the month. This can be bi-weekly billing or weekly cycle billing. Changing the monthly cycle to bi-weekly or weekly billing cycles will allow the utility to bill each customer once per month. This can be achieved by breaking up the current books/routes into cycles that bill on a weekly or bi-weekly basis i.e.,

- **Weekly Cycle Billing**-Currently, the utility has approximately 11,000 accounts. The new process would mean that approximately 3,000 customers will be billed on a weekly basis. The new billing method would also affect the reading process. Since the due dates will be staggered, the payments that are collected should come sooner and the utility's cash flow should improve. To monitor cash flow, a manager of customer service and finance should be reviewing the cash flow from start to finish. Reports from the system should be configured where a manager can quickly assess any variances from the reports out of the system and compare to the amount of each bank deposit.

- **Billing Adjustment** -a policy should be established with approval limits assigned according the dollar amount billed. Also, adjustment forms, explanations, and signatures are required before any adjustments are performed in the system. A payment adjustment/reversal policy should be created as well with all adjustments requiring supporting documentation and 2 signatures for approval before any payments are adjusted. For example:
    - $0-$200 can be approved by the supervisor with a copy provided to the manager.
    - $200-$500-requires the approval and signature of the manager before processing in the system.
    - All amounts above $500 requires approval and signature of the city manager.
- **Payment Adjustment**-a policy should be created to correct any misapplied payments or payments posted with the incorrect amount. The CSR should complete an adjustment form with the necessary customer information and a copy of the customers' history showing the incorrect payment posted. The adjustment form should be presented to the supervisor to approve and make the correction on all payment adjustments. At no time, should the CSR be allowed to reverse or correct payments entered in the system. Copies should be provided to the Customer Service Manager and stored in a centralized location for auditing purposes.

Deposit Reconciliation

There should be reports to track the cash daily, weekly, and monthly to allow managers to establish monitoring controls for the various types of payments received. Steps in the reconciliation process should be assigned by level of authority to ensure there are proper controls in place.

       Example:

1. CSR collects payment and balance cash drawer daily.
2. Supervisor approves and process payment reversals.
3. **Supervisor verifies each individual cash drawer with CSR before preparing deposit.**
4. Supervisor prepares deposit and reconcile deposit against system report(s)
5. Manager receives cash report and deposit information to verify daily bank deposit.
6. Bookkeeper verifies bank statements against general ledger.
7. Upper management receives a monthly report that provides metrics on cash flow.
8. All additional cash reserved for change requests or petty cash should be counted daily by the supervisor and signed off by both the manager and the supervisor at the end of each business day. There should be a daily log that includes the amounts verified accompanied by signatures of both the manager and supervisor responsible for securing the cash. Periodic audits by the city manager should be completed to ensure everything is in the proper order.

At the end of the month, the total amount collected should be included in a monthly report and should match the total amount of the deposits for water and sewer related services. The monthly collected amount should be tracked against what was billed for the previous month to determine the collection rate and included on the monthly report as well. The deposit totals should be also checked against the amounts that are recorded on the General Ledger to ensure the financials are correct. If done correctly, the projections for the financials should be reflected more accurately per the transactions processed during the month.

Schedules

Annual schedules should be created to ensure the policies set forth are adhered to and improve the performance of the overall operation. For the daily operation to run smoothly, the following schedules should be created and provided to the internal staff.

- **Annual Billing Schedule**-based on a weekly cycle billing to include when late fees and penalties should be assessed.
- **Annual Meter Reading Schedule**-Based on a weekly route assignments that correspond with the monthly billing and ensures an average of 30-32 days between reading periods monthly. The Meter Reading schedule should incorporate meter box maintenance as well when there is down time.
- **Annual Disconnect Schedule**-Designed to perform disconnects that correspond with the billing schedule on a weekly basis.

Recommended Policy Changes

- **Disconnects** should be performed on a weekly basis following the delinquent notice to reduce the amount of unpaid accounts remaining active and receiving service. Currently policy allows disconnects to be performed once a month on a Tuesday. ***This policy will improve cash flow.***
- Add a priority charge to offer same day reconnect service and establish a cut-off time for same day service to prevent unnecessary overtime costs. ***This policy will help improve cash flow.***
- **Billing**- should be changed from one time per month to cycle billing based on weekly or semi-monthly billing. Ensuring that customers in each cycle only receive one bill per month. ***This process will improve cash flow.***
- **Delinquent Notice** -process should be modified and in sync with the late fee policy.
- Create a process for returned mail to update correct addresses in the system and notate accounts for future customer complaints. ***This process will reduce complaints about not receiving bills, reduce calls to the office, and save on wasted printing costs to reproduce and mail monthly statements.***
- Develop a complaint process to be resolved within 24-72 hours to prevent customers from escalating their issues at the city council meeting. ***This process will reduce redundant calls.***
- Modify the numbers of days' penalties are assessed as it relates to late fees and ensure the penalties are applied consistently. ***Could possibly help cash flow.***
- **Garden Meters**-Customer should be required to install a new tap and irrigation meter for irrigation systems. The irrigation meter will charge for water only and the domestic water use will be tracked separately to include sewer charges. ***Increased revenue and reduce adjustments.***
- Develop and affidavit form for customers to complete prior to filling their swimming pools. The readings should be taken before and afterwards to justify sewer amounts adjusted off. No more calling in readings.
- Modify the current process for new taps from start to finish. Process include reducing the number of trips for the customers to obtain a new tap.

Internal Audits

- *System Audit*-Cross reference all accounts in the system to ensure that the accounts have the correct rate class for residential and commercial properties. This list can be retrieved from the tax assessment office. ***This process ensures that all structures are accounted for in the billing system.***

- *Field Audit*-Should assign two or more resources to check the type and size of the meters installed on accounts match the billing system information if there is still a structure in place. The resources will likely have to be hired (temporary) or obtained from another department. Total time could take at least 6 months. ***This process will ensure that the rates are properly assigned.***

- *Rates*-an audit of all the rates that are programmed in the system should be checked and approved by upper management. The system programmers should be able to print out a one page document that outlines all the rates used for calculations by rate code to approve. ***This process will prevent incidents that occurred with the 1" meters.***

- *Meter Types*-Field audits should be completed to ensure that the proper meters are installed for each application to measure high and low flow on commercial accounts. Compound meters should be setup in the system to calculate like the regular meters based on the original reading entered in the system by the AMR equipment. ***This process will help to ensure all master meters are registering properly and potentially reduce water loss.***

- *Meter Testing & Calibration*-A testing program should be created to test commercial meters to ensure accuracy. Over time, meters can under register as the parts inside worn and meters can also over register if not calibrated. ***Creating an annual testing program on your large meters can reduce billing problems and complaints from customers that may require additional adjustments +/- against the revenue. This will also serve as a measure to check for water purchased for resale.***

- *Verify account Status*-Check the account status of all accounts with debit balances greater than 90 days to see if accounts remain active in the system vs the occupancy. Some accounts may need to be inactivated if there is no tenant or business occupying the location. **This process will stop the billing of the old tenant and issue a final bill in which deposits are applied against the unpaid balances.** Write off process will follow for unpaid balances.

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Operational Options

The utility has one of two options to choose from.

1. Hire a manager with Utility experience in the water industry, establish and document new policies and procedures, restructure staffing, increase accountability, check the current system configurations, complete internal audits, and stabilize the monthly financials utilizing the current staff who has knowledge of the past operations. Printing of the monthly statements should be outsourced to a 3rd party vendor and switch to a full-page statement format to provide more information. Vendor may be able to provide discounts to postage for bulk processing.

2. Separate the Utility Billing completely from the Treasurers department and outsource the operations including all payment transactions to an outside company.

Final Summary

We strongly suggest conducting a data audit and to understand the City's true final exposure before implementing a new billing system. A new system can only provide better results if the data is not compromised. This city should focus on cleaning up the data and maximizing the current system to produce reports that are consistent month after month. Addressing data integrity issues will prevent data loss during a future system conversion. Completing these tasks will lead to an understanding of the gaps in processes, system functionality and reports to use as requirements in selecting a new system. If not, the city could end up with the same issues in a different system.

It is also recommended that the city hire a manager with experience in overseeing all functional areas that affect customer service, billing, meter reading, collections and financials. This will increase accountability and provide oversight which is needed the most. Once the recommendations are implemented such as internal audits, policies & procedures revamped, restructuring staff and roles, clean up current data, and staff training are completed, a new system can be evaluated and selected.