

AUDIT REPORT – **SEWER BILLING**

*Final Report- August
21, 2014 from the
New Castle County
Auditor's Office*

Audit Report – Sewer Billing

To: Thomas Gordon, County Executive
David Grimaldi, Chief Administrative Officer
James McDonald, Chief of Staff
Samuel Guy, Acting Deputy Chief Administrative Officer
Bernard Pepukayi, County Attorney
Michael J. Coupe, Chief Financial Officer
Denzil Hardman, Accounting & Fiscal Manager

Opinion

In our opinion, there were material weaknesses in internal controls over the sewer billing calculations for the 2013 sewer bills related to Artesian water consumption. These material weaknesses are as follows:

- The lack of a comprehensive County-wide error/issue escalation policy and the noncompliance with the Office of Finance’s issue escalation policy. Overall, we are concerned with the control environment that would allow a known billing issue to be handled only on a customer-complaint basis. See comment #1 on page 11.
- The lack of a written contract between NCC and Artesian (other than a purchase order) governing Artesian supplying water consumption data to NCC. Nor are there written contracts with the other water utility providers. See comment #2 on page 12.
- The lack of responsibility and accountability, on the part of the Office of Finance, for the data received from Artesian Water Company. See comment #3 on page 14.

This report also contains two Significant Deficiencies beginning on page 16 and six Other Reportable Items beginning on page 18.

Background

Certain County Council Members informed the County Auditor’s Office that they had received complaints regarding 2013 NCC sewer bills that were based upon Artesian water consumption. After performing some inquiries of relevant Office of Finance personnel, the County Auditor’s Office decided to perform an audit of the 2013 sewer bills, issued in January 2013, which related to consumption figures provided by Artesian Water Company.

Overview

New Castle County (NCC) Code Chapter 38, Article 2, Division 38.02.500, Section 38.02.503A states “*Basis for service charge.* Except as otherwise provided in this Division, the sewer service charge to any real property ... shall be based upon the consumption of water and the measured or estimated constituents and characteristics of the sewage.” The consumption of water aspect of the bills is covered below. The constituents and characteristics of the sewage are a factor in calculating the annual sewer rate approved by County Council (Section 38.02.503E).

Residential Bills – Basis for Billing

NCC residential sewer bills are based on the lowest two quarterly water consumption reads in a 12-month period, annualized and multiplied by a rate per thousand gallons. The relevant authority for this is as follows:

- NCC Code Chapter 38, Article 2, Division 38.02.500, Section 38.02.505A states “Where metering is available for residential consumption, the charges shall be calculated using the lowest available two (2) quarterly or semiannual water readings greater than zero (0) adjusted to an annual or charging period consumption.” Office of Finance personnel informed us that they can’t recall the County ever using semiannual water readings.
- The County’s webpage on Sewer Service Billing states “Sewer service bills are based on a property’s water usage over a prior 12-month period. The property’s water company provides this information in quarterly amounts to New Castle County.”
- That same webpage provides a link to “Sewer Service Billing Frequently Asked Questions.” One of the questions and the associated response are as follows:

“Q: What is my sewer service bill based upon?”

A: Sewer service bills are based on a property’s water usage over a prior 12-month period. The property’s water company provides this information in quarterly amounts to New Castle County. The water consumption amount is usually calculated using the first three quarters of the prior year and the fourth quarter of the year before that. For example, the annual sewer service amount for 2013 is usually based on the fourth quarter of 2011, and the first three quarters of 2012. The time periods used could vary slightly due to the meter read cycles of some water companies.”

- The NCC residential sewer bills, mailed in January 2013, stated on the back of the bill “New Castle County calculates your sewer charges based on water usage data provided by your water supplier. Four quarterly readings are compared – usually those from the first three quarters of last year and the fourth quarter of the year prior to last year. New Castle County uses the two quarters of lowest consumption (greater than zero), adds them together and doubles this sum to create an annual billing consumption. The annual billing consumption is multiplied by the rate to determine your annual billing charge.”

Industrial/Commercial Bills – Basis for Billing

NCC Code Chapter 38, Article 2, Division 38.02.500, Section 38.02.503.G.1 states “*Nonresidential* ... Total flow for the most recently available three (3) month period shall be used for the major and contract users. All other quarterly accounts shall be billed using twenty-five (25) percent of the most recent twelve (12) months' consumption obtained annually from the servicing water company.” Please note that the contract users are entities that have a written service agreement with NCC such as the City of Newark and St. Andrews School. We were informed that the major users are a group of approximately 55 accounts that have their own sewer meters, and that such meter readings are provided to NCC quarterly by a private company.

All nonresidential accounts other than contract and major users are billed quarterly based on 12 months of water consumption.

Fiscal Year 2014 Budget

Ordinance No. 13-023 as Amended by Amendment Number 2, adopted by County Council on May 28, 2013, established the sewer rates for Fiscal Year 2014 and provided the following schedule in the Fiscal Note:

User Classification	Number of Users	Gross Billing
Major	22	\$8,878,396
Commercial	3,533	\$11,418,111
Residential	116,361	\$29,893,927
Apartment	224	\$7,575.981
Contract	<u>5</u>	<u>\$4,669,732</u>
Totals	120,145	\$62,436,147

Audit Objectives

The objectives of this audit were as follows:

- Determine from discussions with relevant Office of Finance and Artesian personnel whether there were any issues that affected the accuracy of the 2013 sewer bills related to Artesian water consumption.
- If so, perform testing to determine the estimated effect upon such sewer bills.
- Provide recommendations to, and work with, management on how to address any sewer billing inaccuracies.
- Evaluate internal controls over the general sewer billing process and provide recommendations to strengthen internal controls.

Scope

We conducted our audit in accordance with standards promulgated by the Institute of Internal Auditors and the United States General Accounting Office. Our audit testing encompassed a sample of sewer bills, related to Artesian water consumption, issued in January 2013.

Professional auditing standards require that we plan and perform the audit to obtain reasonable assurance whether internal controls are adequate in all material respects. Our audit of internal control included obtaining an understanding of the internal controls in place for calculating the sewer bills, testing the operating effectiveness of the controls, and performing such other procedures as we considered necessary in the circumstances.

Our evaluation of internal control may reveal three categories of internal control deficiencies. The first two categories are of a much greater magnitude than the third category.

- A Material Weakness is a matter that, in our judgment, could adversely affect the County’s ability to accomplish its major objectives regarding sewer billing.

- A Significant Deficiency is a control exception that is of a lesser magnitude than a material weakness; however, it could potentially have an adverse impact upon the County's ability to accomplish its major objectives regarding future sewer bills and, therefore, warrants management's attention.
- Other Reportable Items are opportunities for improvements in the system of internal control over sewer billing.

In general, our testing involves audit sampling. We evaluate the results of the tests and use professional judgment, based on the number of exceptions and/or the materiality of such exceptions, whether to include exceptions in the audit report and, if so, in which category to include them. In some cases, we perform additional testing to help us obtain additional audit evidence in making such evaluation and determination.

Because the scope of an audit does not allow us to examine every single function and transaction performed by an area, an audit would not necessarily disclose all matters that might be material weaknesses, significant deficiencies, or other reportable items.

Response

Management's response is included after each set of recommendations.

cc:

Antonio Prado, Communications Director
New Castle County Council Members
New Castle County Audit Committee Members

General Comments

1. July 15, 2013 Memorandum

Comment

In a memorandum dated July 15, 2013 (See Exhibit A), we provided management with an interim update on the issues with the 2013 sewer bills related to Artesian water consumption.

In the July memorandum, we recommended that the County Administration take steps immediately to remedy the billing issue and to make the applicable customers whole. We said that such remedial steps should include the following items and that the County Auditor's Office would be evaluating management's progress in achieving solutions. We have bolded and italicized management's actions regarding each of these steps.

- Review the analysis performed by the County Auditor's Office and perform any additional analysis deemed necessary. ***On June 27, 2013, we presented the results of our analysis to management of the Office of Finance and Executive Office. Representatives of the Office of Finance and the Executive Office subsequently reviewed our analysis. The Office of Finance also reviewed the financial results (budget versus actual) for sewer service charges for Fiscal Year (FY) 2013 to determine why, given that our analysis showed a high dollar amount of net overbillings, there was not a large variance in the budget versus actual results. Ultimately the Office of Finance determined that the actual results were close to budget (and not significantly higher due to the overbillings) because delinquencies were significantly higher in FY '13 as compared to FY '12.***
- Inform external auditors of issue and inform them that management is taking steps to address it. NCC Finance should strive, based upon the following steps, to determine the necessary corrections and adjust the revenue numbers accordingly. ***Our understanding is that the Office of Finance told the external auditors about the issue the week of September 16, 2013 and then provided them with a dollar amount for an adjusting general ledger entry the week of October 24, 2013.***
- Decide on the revised/fairer formula to be used for properly calculating the quarters of water consumption. ***The County Auditor's Office was involved in several meetings with representatives of the Office of Finance and Executive Office to determine a methodology that was fair and equitable to NCC sewer customers. The Office of Finance and Executive Office decided upon a methodology in September 2013, and then worked on implementing the methodology.***
- Meet with Artesian, and ask them to re-program the formula for arriving at the quarters. ***Representatives of the Office of Finance and Executive Office did meet with Artesian a few times to determine whether Artesian could supply NCC with additional information and to gain Artesian's insight on a fair and equitable methodology for NCC sewer customers. County representatives eventually decided that NCC could write its own computer program, using existing data from Artesian, to implement the agreed-upon methodology.***
- Ask Artesian for a new file. (Audit recognizes from its testing that it may not be possible to get a clean file with four true quarterly readings because in many instances the longer April reading appeared to have been for much longer than 90 days. This will involve additional

decision making on the part of management.) *The Office of Finance did not have to request a whole new file from Artesian, although Finance did have to request water consumption information on accounts that were missing from the Excel spreadsheet obtained from Artesian in January 2013. Also, the County Auditor's Office requested some information from Artesian on billing dates.*

- Use the new Artesian file to calculate what the bills should have been; then compare this information to the actual bills and make any necessary adjustments. (Note: Management will have to make the decision on what to do with accounts that were either over- or under-billed, e.g., for over-billings, does NCC issue refunds or apply a credit towards next year's bill?). *As noted above, the only additional information the Office of Finance had to request from Artesian was for those accounts missing from the January 2013 file. The Office of Finance ran a report for residential accounts to determine the adjustments, if any that needed to be made to customer accounts. Both the Office of Finance and the County Auditor's Office performed testing to ensure the computer program worked properly. The Chief Financial Officer (CFO) consulted with the Executive Office and the Office of Law on how both overbilled and underbilled accounts would be handled. Residential accounts that were overbilled received a credit on their 2014 bills. Residential accounts that were underbilled for more than \$11.05 received a debit (additional charge) on their 2014 bills. For commercial accounts, a disclosure (indicating that the account may have been billed for additional months in 2013 as a one-time occurrence to bring all accounts in alignment with the same billing cycle) was included as an insert with the 2014 bills.*
 - Note: The total amount of 2014 credits for the overbilled accounts was \$677,604. The total amount of 2014 debits for the underbilled accounts was \$111,907.
- If any of the affected accounts are delinquent (and possibly even in legal proceedings to collect the delinquency), ensure the adjustment to the customer account is taken into consideration. *The CFO assured us that any delinquent accounts affected by this issue would be handled properly.*
- Obtain consensus from NCC Council and the Office of Law on the corrective action being taken, including what notices, if any, should be sent to the affected customers, and also including such elements as what is an acceptable number-of-days threshold for a quarter. *We told the CFO several times, via e-mail and verbally, that we expected the Office of Law to review and approve the methodology that was to be used and also to determine whether the overbilled customers should be paid interest; we don't know whether this was done. The County Auditor's Office reviewed the documented methodology prepared by the Office of Finance and provided feedback on it. The County Auditor's Office also reviewed a reconciliation prepared by the Accounting & Fiscal Manager that showed various subclasses of accounts that were excluded from the methodology because they were not affected by the Artesian issue. Council was in agreement with the corrective action taken for residential accounts. We don't believe Council was informed of the corrective action for commercial accounts.*
- Make any necessary adjustments to the Fiscal Year 2014 budget. *We are not aware of any adjustments that were made to the FY '14 budget for this issue.*
- Work with Artesian and with entities internally, as warranted, to ensure there are no problems with the file for the 2014 sewer bills. *We did not perform any testing/inquiries to determine if there have been any issues with the 2014 bills. Given what happened in 2013,*

we are hopeful that the CFO ensured there was a strong quality control process prior to any bills being mailed.

- Assess NCC's file validation and issue escalation procedures. *See report comments concerning these items.*

Recommendations

Various internal control aspects of the July 15, 2013 memorandum will be addressed in the following pages of this report. We will be making recommendations, and asking for responses, there.

Management's Response

None required.

2. County Code on Calculating Sewer Bills.

Comment

As addressed in the cover letter to this report, NCC residential sewer customers are billed annually and the bill is based upon the lowest two quarterly water reads in a 12-month period, annualized and multiplied by a rate per thousand gallons. Industrial/commercial sewer customers are billed quarterly and each quarterly bill is based upon twenty-five percent of the total water consumption over a prior 12-month period.

This audit caused the County Auditor's Office, as well as the Administration, to question the methodology used for residential customers, i.e., using the lowest two quarters of water consumption. Office of Finance management informed us that the original philosophy behind using the lowest two quarters was to not penalize people who use a lot of water in the summer months (e.g., filling pools, watering lawns) which does not necessarily go into the sewer system.

Preliminarily, it would appear that the lowest two quarters basis for calculating sewer bills may be unfair to one property owner profile (who consumes a similar volume of water consistently throughout the year) to the advantage of another property owner profile (who, for a series of possible reasons, consumes water at materially different volumes throughout the year).

We researched how the City of Wilmington, Sussex County, and the City of Philadelphia calculate residential sewer bills and found the following:

- From Sussex County website:
 - "Annual Service Charge: The service charges for each sanitary sewer or water district are established annually, based on the fiscal year budget as adopted by the Sussex County Council. Service charges recover the costs of operating and maintaining the collection system, transmission system, and treatment facilities. These include costs such as electric power, personnel, fuel, supplies, etc. Service charges may also include the debt service for the treatment facilities. They are billed quarterly. The amount of service charges

billed to each user is based on the number of Equivalent Dwelling Units (EDUs) on the property.” Thus, the Sussex County sewer charge is a flat fee assessed quarterly.

- “Annual Assessment Charge: The assessment charge recovers the cost of constructing the sewer or water system based on the annual bond payments, as well as major maintenance and system upgrade expenses ... The amount of assessment charges billed to each user is based on the number of assessable Front Feet associated with the property, as determined by Section 110-92 of the Sussex County Code. Normally, this is based on the street frontage of the property.” This annual charge appears on the customer’s property tax bill.
- City of Wilmington: The quarterly sewer fee is based upon a percentage (currently 75%) of the customer’s quarterly water consumption.
- City of Philadelphia: There is a monthly sewer service charge based upon the size of the customer’s water meter. Also, for sewer customers using City of Philadelphia water, there is a monthly sewer usage charge based upon the customer’s actual water consumption for that month.

Recommendation – Executive Office

We recommend that the County Administration re-evaluate its methodology for calculating sewer charges and work with County Council to make any applicable changes to the County Code. Please also read the recommendation in the next General Comment.

Management’s Response – Executive Office

The Administration is currently researching other jurisdictions that provide only sewer service. It is our desire to form a working group (Council, Law and Finance) to study and make recommendations for possible changes. Based on the workload and other pending issues, this may be in FY2016.

3. *Apartments (including House Rentals) and Commercial Properties.*

Comment

NCC Code Article 2, Division 38.02.500, Section 38.02.503.B states “*User classification categories*. Except as otherwise provided in this Division, all users shall be classified by a user classification category according to the principal activity conducted on the user's premises (underline added) ... “

Apartments

Section 38.02.503.C.4 then provides a classification of “D” for apartments. Customers in this class are billed quarterly based upon a prior period’s 12-month water consumption.

In performing our testing of sewer accounts related to Artesian water consumption, we noticed a rental property company that had some of its properties classified as Apartments and some as Residential. The five to six properties classified as Residential were, of course, billed based upon a lowest-two-quarters basis as opposed to a total-consumption basis. (Note: These 5-6

properties would have generated about \$750 more in sewer revenue for FY '13 had they been billed on a total consumption basis.) We can only surmise that the properties not coded as Apartments were coded as Residential because they are not actually apartment complexes; rather they are individual homes.

This leads us to the question of property owners who own properties that are zoned as Residential but the property is being rented. Does such use classify as “apartments”?

The Office of Law informed us that the definition of “apartment” in NCC Code Chapter 40, Article 33, Division 40.33.300 is “A dwelling unit located in a building containing at least one (1) other dwelling unit or a commercial use permitted in the zoning district.” A “dwelling unit” is defined as “One (1) or more rooms physically arranged so as to create an independent housekeeping establishment for occupancy by one (1) family with separate facilities for all of the following: sanitation, living, sleeping, cooking and eating.” Based on these definitions, it appears that a residential property containing more than one dwelling unit is an “apartment.” Conversely, if a residential property is being rented but contains just one dwelling unit, the property is not an “apartment.”

If the Office of Law agrees that such properties should be classified as “apartments”, then we have the following ideas that NCC could pursue to ensure that all apartments are classified as such and are thus billed on a total consumption basis. This list is not meant to be all inclusive.

- Checking the sewer billing file against the NCC rental property database.
- Checking the sewer billing file against the property tax billing file; if the names are different, the property may be rented.
- Reviewing (e.g., search on apartment building name) the sewer billing file to determine if name or volume suggests an apartment building.
- Getting listings from property management companies of NCC properties that are rented.
- Consulting with the State of Delaware to determine if the State can provide a list of corporate entities (including LLC’s) that are engaged in residential rentals.
- Consulting with Artesian to help identify the properties that may be coded on their system as apartment buildings.

Recommendations – Offices of Law and Finance

We recommend that the Office of Law research whether:

- Residential properties with more than one dwelling unit should be classified as “apartments” and, if so,
- Whether such properties should be billed for sewer on a total consumption basis per NCC Code Article 2, Division 38.02.500, Section 38.02.503.G.1 (Nonresidential accounts).

If the Office of Law determines that such accounts should be coded as Apartments and thus billed based on a total consumption basis, we recommend that the Office of Finance perform research and implement internal controls to ensure all such properties (now and in the future) are correctly coded and billed.

Also, to ensure that all commercial enterprises are correctly coded as Commercial, we recommend that the Office of Finance:

- Consult with the Special Services Department on their criteria for coding accounts as Commercial and determine whether such criteria need to be changed. (Refer to Comment # 3 on page 20 in reference to memorandum on User Class Descriptions.)
- Evaluate the account file each year to determine if there are any accounts coded as Residential that should not be.

Office of Finance management should also consider dedicating resources to identifying other opportunities to generate additional sewer revenue. Such opportunities might include:

- Determining to what extent the water consumption volume of seniors billed a \$36 annual flat fee is consistent with a senior profile. Income or graduated.
- Performing quality control checks to ensure that all applicable properties are properly coded for sewer billing.
- Performing an analysis of the minimum bill amount to determine if it is sufficient to cover County costs.

Management's Response – Office of Law

To the extent that the County is able to confirm that a property satisfies the requirements to be classified as an apartment, every effort should be made to ensure that the property is properly classified.

Management's Response – Office of Finance

The Office of Finance stands ready to fully cooperate and assist with efforts as resources are available. These items will be included in our ongoing FY 2015 CSA (Control Self Assessment) review to determine the availability of resources and any additional costs associated.

4. Cost versus Benefit of Internal Controls

Internal Audit's responsibility is to evaluate the internal controls management has in place to enhance the likelihood that management's objectives relating to sewer billing will be achieved. Management must evaluate the comments and recommendations in this report and balance the costs of implementing new or enhanced controls versus the benefits to be derived. We realize that management may elect not to implement a new or enhanced control after weighing the costs versus the benefits. In fact, during our closing meeting with management, we were informed that at least one our recommendations was a past practice but was discontinued due to staffing shortages.

A response to this comment is not necessary.

Comments & Recommendations – Material Weaknesses

1. *Error/Issue Escalation Process.*

Comment

The Accounting & Fiscal Manager knew, at least as early as December 2012¹, that the water consumption figures in the Artesian file encompassed much more than a 12-month period for certain customers and, thus, the sewer bills could be incorrectly calculated. Yet he apparently decided, without consulting with the Chief Financial Officer (CFO), to have NCC address the issue on a customer-complaint basis only. Furthermore, he did not have anyone perform a financial analysis to determine the extent of the problem and its effect upon NCC sewer customers.

In our opinion, such a decision should not have been made at the Accounting & Fiscal Manager level. The issue itself should have been communicated to the CFO and he, in turn, should have communicated it to the Chief Administrative Officer (CAO) and the County Executive. The decision on how to handle the issue should have been made by the CFO with the approval of the CAO and County Executive.

An Office of Finance Administrative Policy, titled “Tax Sewer, and Main. Corp. Billings” and dated 4/20/10, states:

“Prior to each annual and quarterly billing, the Treasury staff member responsible for billing will notify the Treasury Manager of the proposed date for mailing the bills, the proposed due date, any proposed changes to the bill, and any issues related to the billing. After reviewing these items and making any changes, the Treasury Manager will communicate them to the Chief Financial Officer, making recommendations as appropriate. The Chief Financial Officer will have final authority on all matters related to billing. During the process of preparing the billing, the Treasury staff member responsible for billing shall notify the Treasury Manager of any issues that arise that could affect the accuracy or timely mailing of bills.”

The individual with the title of “Treasury Manager” no longer has responsibility for the Billing area (nor did he have responsibility for this area for the 2013 sewer bills). Regardless of titles, however, this policy makes it clear that the Chief Financial Officer should have been made aware of the issue with the Artesian file. (“The Chief Financial Officer will have final authority on all matters related to billing.”)

¹ Note: Artesian informed us that the file was programmed based upon instructions from the Accounting & Fiscal Manager. However, the Accounting & Fiscal Manager informed us that he never gave them such instructions.

Recommendations – Executive Office and Office of Finance

We recommend that Executive Management write an error/issue escalation policy for the Executive Branch of NCC Government. Such a policy should define:

- Different levels of errors/issues.
- When such errors/issues need to be reported to a higher level.
- To whom such errors/issues will be reported.
- Who will make the ultimate decision (if one needs to be made) on how to handle the error/issue.
- Repercussions of not escalating errors/issues to the appropriate higher level.

We also recommend that the Office of Finance assess its Administrative Policy, titled “Tax Sewer, and Main. Corp. Billings”, and determine why the CFO was not informed of the Artesian issue in December 2012. Perhaps the CFO needs to be more proactive each year and actually ask, prior to the bills being mailed, whether there are any issues.

Management’s Response – Executive Office

We agree that a County-wide escalation policy would be helpful and consistent with best practices. To that end, we are drafting the same and anticipate a final version to be released by September 2014.

Management’s Response – Office of Finance

Maria Scarpa of the Office of Finance has been assigned this project. We will provide quarterly updates to both internal staff as well as Council and the Auditor.

2. *Contracts with Artesian and Other Water Utilities*

Comment

NCC Code Article 2, Division 38.02.500, Section 38.02.505.C.2 states: “Each municipality or public corporation or other person owning or operating any system of water distribution serving three (3) or more parcels of real property in the County shall from time to time, after request therefor by the Chief Financial Officer, deliver to the Chief Financial Officer a statement showing the amount of water supplied to every such real property as shown by the records of the municipality or public corporation or other person. The statements shall be delivered to the Chief Financial Officer within ten (10) days after the request is made, and the Chief Financial Officer shall pay the reasonable cost of preparation and delivery of such statements.”

When we first became aware of the issue with the Artesian water consumption file (used for the calculation of the 2013 sewer bills), we asked the Office of Law for a copy of NCC’s contract with Artesian. However, we were surprised to learn that there is no written contract between NCC and Artesian (other than a purchase order) governing Artesian supplying water consumption data to NCC. Nor are there written contracts with the other water utility providers.

We believe that third party (water utility) relationships involving the basis for approximately \$46 million in customer billing should be supported by written contracts. (Note: Some accounts' bills, primarily large industrial customers, are determined not by water consumption but by sewer meters.) In the scenario with Artesian, such a contract would have been helpful in ascertaining which party had the responsibility to correct the quarterly water consumption data; particularly since Artesian was not very willing to give NCC certain information which would have helped in the methodology management eventually decided to use to address the problem.

Please note that we consulted with the County's external auditors on this and they agree that there should be written contracts.

Recommendation – Office of Finance

We recommend that the Office of Finance, with help from the Office of Law, negotiate written contracts with the water utilities which govern the responsibilities of each party to the contract. Each contract should be formally approved by the Office of Law and cover, among other things,

- The responsibilities of the water utility, e.g., to give true consumption readings as requested, factoring any water consumption adjustments made by the utility through the year. (In other words, any consumption data provided to NCC at year end should be reflective of any water consumption adjustments made by the utility during the period covered by the file.)
- The responsibilities of NCC in accepting and using the data.
- Responsibilities of both parties in formulating a solution when a problem arises.
- Requirement for an attestation from the water utility that the data provided is complete and accurate and that adequate validation was performed prior to sending the file to NCC.
- Penalties in the event of failure to fulfill requests for data properly.
- Security requirements.
- Right of NCC to audit data.

Management's Response – Office of Finance

We agree and have asked Law to research other jurisdictions and make recommendations for best practice for our review.

We also have come to understand some of the issues that if we had more complete data, we would have been able to spot inconsistent data.

We are expanding our request, with increased data. For example, we learned that the meter reading dates and consumption data became critical in identifying and calculating 90 days of water use. By expanding our requests, we are able to more accurately calculate bills to our customers.

Executive Office Clarifying Remarks

The County is in a difficult position to force a contractual relationship with a sole source vendor. The County is a client purchasing information. It is our hope to get State support to make the contractual relationship a provision of the Public Service Commission Administrative Code.

Hopefully, with expanding the information request and the anticipated random audits, any issues will be resolved early in the billing cycle.

3. Artesian and New Castle County Adjustments / Data Responsibility and Accountability

Comment

Due to the issue with the Artesian file used for the calculation of the 2013 sewer bills, the Billing Unit created in the Hansen System a special log note whenever an Artesian customer called in to question his/her sewer bill. The Billing Unit then contacted Artesian and asked for corrected quarterly readings, if applicable. If the corrected readings resulted in a change in the lowest two quarters of water consumption, the customer's account was adjusted accordingly. Our testing of account adjustments that were made due to the Artesian issue revealed the following:

- Artesian was inconsistent in the methodology it used to provide NCC with corrected water consumption readings. We found instances for the same billing cycle where Artesian calculated the quarters of water consumption in two different ways.
- We spoke to an Artesian official and asked him for Artesian's methodology for calculating corrected readings. He was not able to tell us what it was.
- The Accounting & Fiscal Manager told us that the Billing Unit did not know Artesian's methodology because the County did not want to take any responsibility for the corrected readings.

We don't understand why the Billing Unit would not have wanted to ascertain Artesian's methodology for providing corrected quarterly readings. We believe that, once the Billing Unit became aware that there was an issue (and once they had received a new file from Artesian showing all readings for the period covered by the original file), internally and with no more involvement from Artesian, they should have:

- devised an equitable and consistent methodology for recalculating the quarterly readings.
- used this methodology to recalculate the quarters of water consumption for the customers calling in.
- made the proper account adjustment accordingly.

We believe that once NCC validates the file received from the water utility that NCC must then take accountability for it. Accountability would include NCC researching any customer inquiries to determine whether or not an adjustment should be made.

Frequently during the audit, the Office of Finance and others informed the County Auditor's Office that since the data is Artesian's, NCC should not take responsibility for such data. We disagree with this.

Recommendation – Office of Finance

For those water utilities that bill their customers for water monthly but combine this data into quarters for NCC, we recommend that the Office of Finance, with a written contract in place as recommended earlier in this report:

- Obtain the consumption and adjustment data in raw form (monthly data) from the water utility, and
- Combine the data into quarterly values. (Again, this should not be the responsibility of the utility.)

NCC would then be fully responsible for its billing data and the utilities would never again be expected to manipulate the data for NCC (i.e., combining data into quarterly values).

Management Response – Office of Finance

It is our hope that the expanded data request will allow us to more thoroughly test consumption results. This should help to identify any future issues, should they arise.

Comments & Recommendations – Significant Deficiencies

1. Review of Account Adjustments

Comment

Sound internal control practices dictate that monetary adjustments to customer accounts (as well as certain non-monetary adjustments such as changing an account's classification) should be reviewed by someone other than the person posting the adjustment to ensure the adjustment was properly authorized, was done for legitimate reasons, and was properly posted. However, our testing of sewer billing adjustments revealed that a second person is not reviewing these adjustments. Nor does it appear that the adjustment itself is being authorized by a supervisor/manager.

As a result, an unauthorized and/or illegitimate adjustment could be posted, or an authorized and legitimate adjustment could be posted incorrectly.

Office of Finance management informed us that, in the past, there was a part-time employee who verified adjustments. However, this position no longer exists.

Recommendations – Office of Finance

We recommend that Office of Finance management establish a policy, for sewer bills, that requires all monetary adjustments (and certain critical non-monetary adjustments as determined by management) to be reviewed and approved by someone other than the person posting the adjustment to ensure the adjustment was properly authorized, was done for legitimate reasons, and was properly posted. Management should consider designing an adjustment form, with applicable preparer and approval lines, to be used in this process. The form should also include a line for the supervisor/manager authorizing the adjustment.

We also recommend that Office of Finance management review its adjustment procedures in areas other than sewer billing.

Management Response – Office of Finance

We agree and are looking to implement a short term solution by creating an email account named wateradjustments@nccde.org. Whenever an employee makes an adjustment to a customer's account, the transaction will be documented by placing the account number in the subject line and copying the appropriate supervisory staff in Finance.

2. Processing of files received from water utilities.

Comment

At the time of our audit, it appeared that the Accounting & Fiscal Manager had sole responsibility for all major aspects of processing the water consumption files from the water utilities, e.g.,

- Receiving the files from the water utilities.
- Uploading the files to the Water Consumption System.
- Leading the process of performing reasonableness checks of the water consumption data.
- Preparing the Hansen System to receive information from the Water Consumption System.
- Initiating the process of having the Hansen System calculate the customer bills.

Although we applaud the efforts of the Accounting & Fiscal Manager in having the necessary knowledge to perform all this work, we strongly believe that he should train at least one other staff member in these functions. There needs to be at least one backup in the event the Accounting & Fiscal Manager is unable to perform all the functions one year.

Recommendations – Office of Finance

We recommend that Office of Finance management:

- Have the Accounting & Fiscal Manager train a staff member(s) in the various functions involved from the receipt of the annual water consumption files through the calculation and generation of customer sewer bills. It is our understanding that two people were trained in conjunction with the processing of the 2014 sewer bills.
- Evaluate all aspects of the sewer billing process to ensure adequate segregation of duties.

Management Response – Office of Finance

This recommendation has already been implemented. We have two additional staff members being trained as of the writing of this response.

Comments & Recommendations – Other Reportable Items

1. Validity/Reasonableness Checks of Water Consumption Data

Comment

The Accounting & Fiscal Manager informed us that, prior to the annual sewer bills being generated, the Billing Unit performs various validity/reasonableness checks on the water consumption data received from the water utilities. In general,

- A high level check is performed comparing the total water consumption in this year's file to that of last year's file.
- A report is run of every residential account where the water consumption is over a certain number of gallons. The Billing Unit looks at the consumption for the previous three years to see if the consumption for the current year may be out of alignment. If so, the Billing Unit calls the water utility to verify whether the current year's numbers are accurate. The most common problem is with new homeowners where there may be only one or two quarterly readings. This report is run for the following categories of accounts:
 - Every residential (condos, mobile homes, regular residential) account where the water consumption is over 299,000 gallons.
 - Every residential account where the water consumption is between 220,000 and 299,000 gallons.
 - Every residential account where the water consumption is between 180,000 and 220,000 gallons.
- For every residential account where the water consumption is below 180,000 gallons, the Billing Unit runs another report which identifies all accounts where the water consumption has been increased by a factor of 3. The Billing Unit reviews these accounts to look for anything that might be out of the ordinary.

The Accounting and Fiscal Manager informed us that these checks can result in adjustments being made to the water consumption data.

Although we are pleased that the Billing Unit performs validity/reasonableness checks, we have the following observations:

- It appears that some of the checks the Office of Finance performs could be automated and the results of the checks could be posted to exception reports for Finance to review (as opposed to Finance manually determining what is an exception).
- Due to a limitation with the Hansen System, the validity/reasonableness checks are not performed until the water consumption data for all water utilities is uploaded to Hansen. If not for this limitation, the validity/reasonableness checks on this information could be performed much earlier than they are (usually not until December). The water consumption information from Artesian is typically received in late October or early November; had such checks been able to be performed earlier for the 2013 bills, perhaps Finance would have made the decision to correct the Artesian issue then.

Recommendations – Office of Finance

We recommend that Office of Finance management:

- Evaluate the validity/reasonableness checks currently being performed (while also evaluating whether there should be any additional checks) to determine if any of these could be automated; and, if so, meet with Information Technology to have them do the necessary programming.
- Consider asking the vendor for a system change which would enable the validity/reasonableness checks to be performed shortly after each utility's water consumption information is received, rather than having to wait until the information from all utilities has been received and uploaded to Hansen.
- Since sewer customers are not provided with enough data on the bill to do their own independent validation of the bill's accuracy, consider adding the quarterly water consumption amounts to the bill to enable customers to do so.
- Consider asking all water providers, when the annual request is made for the water consumption file, to provide a sample of actual statements across billing cycles so that Finance can use these to validate the accuracy of the quarterly water consumption amounts. [Note: If the recommendation on page 15 is implemented (concerning NCC calculating the quarters), this would not be necessary.]
- Consider designing an adjustment form, with lines for appropriate approvals, to document the reason for any changes made to water consumption data.

Management Response – Office of Finance

We agree. It is our hope that with the expanded data request from the vendor (date of reads, consumption, bill date, customer name and account number) that we will be able to build a data model that will provide us with greater ability to spot anomalies. This model would be similar to the program that we used to correct the Artesian issues. While a priority, we will have to wait for design and programming services to be available. January 2015 is the target date for implementation.

2. *Average and Minimum Sewer Charges*

Comment

NCC Code Article 2, Division 38.02.500, Section 38.02.505.A states “Where metering is not practical or readings are not available, the calculated Countywide average annual consumption for residential users will be calculated.” As an example, before the annual sewer bills are mailed, the Billing Unit uses the deed date to identify every account that had a new owner during the year. The first annual bill a new owner receives is based on one of three measures - the county average, the consumption billing from the prior owner's water readings, or the consumption billing from the new owner's partial water readings - whichever is lowest. The County average used for the 2013 bills was \$266. (For the next year's bills, the Billing Unit looks at the new owner's actual water consumption for the period the bill was based upon and makes a new owner adjustment if this reveals that the customer's prior year bill should have been higher or lower.)

Our discussion with the Accounting & Fiscal Manager revealed that he is the one who performs the calculation of the County average and that there is no one reviewing his calculation. Also, for 2013, the County average is overstated because of the Artesian problem.

NCC Code Article 2, Division 38.02.500, Section 38.02.503.F states “The annual minimum charge for any account shall be as adopted by ordinance of County Council.” If a sewer customer can verify that his/her residence did not have any water consumption during the year, then the customer’s account is adjusted so that he/she is only assessed the minimum fee.

The Accounting & Fiscal Manager informed us that the minimum charge is \$50; however, we did not see that in the annual sewer rate ordinance (Ordinance 13-023) which was passed by County Council on April 23, 2013. The Accounting & Fiscal Manager informed us that the minimum fee was established by ordinance in 2005 and that it has not changed since.

Recommendations – Offices of Finance and Law

We recommend the following:

- The Office of Finance has another manager formally review and approve the Accounting & Fiscal Manager’s calculation of each year’s County average bill.
- The Office of Finance, after recalculating the bills for the accounts affected by the Artesian issue, recalculate the County average and determine if this has any effect upon the customers who were charged the average. The Accounting & Fiscal Manager informed us that it did not have any effect.
- The Office of Law research whether the minimum sewer fee should be included in the annual sewer rate ordinance voted on by County Council, even if it has not changed from the prior year.

Management Response – Office of Finance

We agree and will have one of our CSA staff formally review and approve the Accounting & Fiscal Manager’s calculation of each year’s County average bill.

Management Response – Office of Law

From a legal perspective, we should include the minimum in the annual sewer rate ordinance and we will do that starting next year.

3. *User classification categories.*

Comment

NCC Code Article 2, Division 38.02.500, Section 38.02.503.B states “*User classification categories.* Except as otherwise provided in this Division, all users shall be classified by a user classification category according to the principal activity conducted on the user's premises. For

general industrial and commercial users, the standard industrial classifications (SIC) as established by the Standard Industrial Classification (SIC) Manual, 1972, Executive Office of the President, Office of Management and Budget, Washington, D.C., shall be used ...”

Section 38.503.C then states that the BOD (Biochemical Oxygen Demand) and SS (Suspended Solids) components, used in the computation of the sewer service charge for industrial/commercial customers, vary depending upon the SIC subclass classification.

Our audit revealed:

- The most recent sewer rate ordinance (13-023) passed by County Council indicates that the rates for the BOD and SS components are the same regardless of the user classification category. We looked at the annual sewer rate ordinances back to the Year 2000 and the rates for the BOD and SS components have been the same at least back to then. However, the Accounting & Fiscal Manager informed us that there are different BOD and SS rates depending upon the User Class and that the rates for these components in the ordinance are composite rates based upon all the different classes. Therefore, the BOD and SS rates are important in determining the amount of one’s bill.
- The SIC Manual is no longer the guidance that is typically used in the United States for determining industrial classifications. Instead it is being supplanted by the six-digit North American Industry Classification System (NAICS), which was released in 1997; however certain government departments and agencies, such as the SEC, still use the SIC codes.
- The basis for classifying any new sewer account is a June 15, 1976 memorandum titled “User Class Descriptions.” This memorandum is over 37 years old.

Recommendations – Office of Finance and Special Services Department

We recommend that management of the Office of Finance and the Special Services Department:

- Evaluate whether there is a need to continue classifying industrial users based upon the SIC Manual.
- If management is going to continue to assign classifications for industrial and commercial users, evaluate the June 15, 1976 memorandum to determine if the types of businesses in the various subclasses need to be adjusted.
- Perform a periodic analysis of industrial and commercial users to determine whether certain such users may be heavier users of the sewer system than others and whether this should impact their rates.

Management Response – Office of Finance

We have directed Law and Special Services to advise and determine a path forward. We will keep the Auditor advised of the progress.

4. Disputes over billings.

Comment

NCC Code Article 2, Division 38.02.500, Section 38.02.504.B states “*Disputes over billings or delinquency*. When there is a bona fide dispute over a sewer service billing or delinquency, the sewer service user may present a written statement setting forth the facts and attesting to such dispute. The Chief Financial Officer, with the advice of the County Attorney, shall review the statement and surrounding facts and may authorize the Office to make appropriate adjustments to the sewer service account. A memorandum confirming any adjustments made pursuant to this subsection shall be provided to the County Auditor.”

We do not know the precise definition of “bona fide dispute.” Therefore, we do not know whether the adjustments made by the Billing Unit in response to customer inquiries regarding the Artesian issue fall into this category. We do know that such customers were not required to submit a written statement setting forth the facts and attesting to such dispute, and that a memorandum confirming any adjustments was not provided to the County Auditor. Our “gut” feeling is that such customers were questioning why their bill was higher this year than last year and were not necessarily “disputing” the bill. The adjustments the Billing Unit made were a result of such customer inquiries and the Billing Unit already knowing that there was a potential issue (and therefore requesting Artesian for corrected readings).

We do want to point out, however, that the County Auditor’s Office has never (at least since the tenure of the current County Auditor) been provided with a memorandum regarding any adjustments made pursuant to Code Section 38.02.504.B. We have to believe that there have been bona fide disputes in the past. The Accounting & Fiscal Manager informed us that most of the disputes involve questions over water consumption and that a customer is required to provide documentation if the dispute is over a water leak.

Recommendation – Offices of Law and Finance

We recommend that the Office of Law research the definition of “bona fide dispute” and provide legal guidance to the Office of Finance. Based upon such guidance, we recommend that the Office of Finance write a policy which ensures compliance with County Code whenever such disputes occur.

Management Response – Offices of Law and Finance

There is no definition of "bona fide" in the New Castle County Code. The definition of "bona fide" from Black's Online Legal Dictionary 2d edition is: “in or with good faith; honestly, openly and sincerely; without deceit or fraud; truly; actually; without simulation or pretense; innocently; in the attitude or trust and confidence; without notice of fraud.”

The Office of Finance will work with the Office of Law to ensure that an appropriate policy exists to handle these types of matters. We will have a draft policy for review by November 2014.

In matters of consumption calculation, Finance will work with the water company. We will report to the customer our findings. We will begin documenting these requests, and changes from the water company, via email.

5. Job Descriptions.

Comment

The CFO provided us with the current Office of Finance organization chart and it shows that the Billing function reports to the Accounting & Fiscal Manager. We noted that the job description for the individual holding the title of Treasury Manager contains responsibilities for sewer billing (as well as other billings), yet he is apparently no longer responsible for this function.

Recommendation – Office of Finance

We recommend that the Office of Finance evaluate the Treasury Manager job description, as well as any other job descriptions affected by changes in job responsibilities, to determine if any job descriptions need to be re-evaluated by Human Resources.

Management Response – Office of Finance

With the limited resources, this may take several months. It will be worked on as resources are available. Hopefully, it will be completed and the necessary changes will be reflected in the FY 2016 budget.