

**WATER DEPARTMENT
DISTRIBUTION AND CONSUMER SERVICES
WATER USAGE AND BILLING ACCURACY
AUDIT 11-08
AUGUST 11, 2011**



CITY OF TAMPA

Bob Buckhorn, Mayor

Internal Audit Department

Roger Strout, Internal Audit Director

August 11, 2011

Honorable Bob Buckhorn
Mayor, City of Tampa
1 City Hall Plaza
Tampa, FL 33602

RE: Water Usage and Billing Accuracy, Audit 11-08

Dear Mayor Buckhorn:

Attached is the Internal Audit Department's report on Water Usage and Billing Accuracy. The Internal Audit Department normally performs a follow-up audit six months after the final report is issued. To allow the Water Department sufficient time to implement the audit's recommendations, the follow-up audit will be added to our FY2012 audit agenda. The Water Department has already taken positive actions in response to our recommendations. We thank the management and staff of the Water Department for their cooperation and assistance during this audit.

Sincerely,

/s/ Roger Strout

Roger Strout
Internal Audit Director

cc: Steve Daignault, Administrator of Public Works and Utility Services
Brad Baird, Director of the Water Department
Elias Franco, Manager of Distribution and Consumer Services
James Buckner, Director of Technology and Innovation

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/s/ Gary Chapman

Senior Auditor

/s/ Christine Dever

Senior Auditor

/s/ Thomas Sanchez

Senior Auditor

/s/ Vivian Walker

Senior Auditor

/s/ Roger Strout

Audit Director

**WATER DEPARTMENT
DISTRIBUTION AND CONSUMER SERVICES
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BACKGROUND

The Tampa Water Department, a department under Public Works and Utility Services, treats and delivers drinking water to a service population of approximately 570,000 people in the Tampa Bay area and is responsible for city-wide water conservation efforts to help manage local water demands. The Tampa Water Department is organized into the Production, Distribution and Consumer Services, and Engineering Divisions, who report to the Department Director.¹

Distribution and Consumer Services is responsible for maintenance of the water distribution system and the monthly utility billing of water, wastewater, and solid waste services for the City. The consumer services section handles all consumer inquiries, utility account services, and system maintenance requests. Most of the City's utility customers receive a consolidated monthly bill for three utility services – Water, Wastewater, and Solid Waste. The Water Department delivers potable and reclaimed water services to over 125,000 customers. The Division reads over 140,000 water meters, most of them bi-monthly, and prepares and mails bills monthly. The Department's service area encompasses 211 square miles.¹

In December 2010 and January 2011, an unusually large number of customer complaints were received concerning high water bills. High water bill issues began to be raised in media coverage and by City Council. In response, the Mayor assembled an internal task force to examine the complaints, identify potential causes for the high bills, and provide recommendations to improve service levels. As part of the task force, the Internal Audit Department was requested to conduct an independent audit of the Water Department's Distribution and Customer Services Division.

STATEMENT OF OBJECTIVES

This audit resulted from a request by the City's Administration and was added to the Internal Audit Department's FY11 Audit Agenda. The objectives of this audit were to:

1. Verify that the meter readings entered in handheld meter reading equipment were accurately recorded in the Multi-Service System and that usage and billing calculations were accurate.
2. Verify that a statistical sample of water meters was functioning correctly.
3. Review and evaluate the processes for identifying and resolving exceptions detailed in system reports.
4. Ensure the adequacy of complaint investigations and that the dispositions reached were supported and reasonable.
5. Review and evaluate the meter reading processes for efficiency and effectiveness.

¹ Source: <http://www.tampagov.net>

STATEMENT OF SCOPE

All handheld equipment used to record meter readings on January 31 and February 1, 2011, and the resulting usage and billing calculations from a sample of observed meter reading entries were tested for accuracy. The audit period covered meter reading activity and water usage that occurred from January 1, 2010, to January 31, 2011. Meter accuracy tests were conducted on a sample of active water meters. System generated exception reports for November and December 2010 were reviewed for no usage, high usage, and miscellaneous reasons. The complaint investigation activity that was reviewed occurred during January and February 2011 and focused on the three highest complaint generating service areas.

Source documentation was obtained from the Water Department's Distribution and Consumer Services Division. Original records as well as copies were used as evidence and verified through physical examination.

STATEMENT OF METHODOLOGY

For the exception report testing, Automated Command Language (ACL), one of the top data analytics and continuous monitoring software, was used to select a statistically random sample based on 95% confidence level, 5% precision, and 0% error rate. Most of the government internal audit departments in the Tampa Bay area use ACL. Statistical sampling was used in order to infer the conclusions of test work performed on a sample to the population from which it was drawn and to obtain estimates of sampling error involved. When appropriate, judgmental sampling was used to improve the overall efficiency of the audit.

The accuracy of water meters was tested by running approximately 7.5 gallons of water from an outside source for a statistical sample of residential and commercial customers. Accuracy was calculated using the relative position of the meter register's red sweep arm (see below).

The leak detector is the little red triangle – if it turns when no water is being used, a leak is likely. It may have to be observed over a period of 15 seconds to ensure no movement.

The red sweep arm is a flow indicator that measures at very low flows. One complete revolution equates to 7.48 gallons of water.

The meter register is similar to a mileage odometer. Rates are based on hundreds of cubic feet, so the last two digits are not utilized in calculating the customer's bill.



To achieve the audit's objectives, reliance was placed on computer-processed data contained in the Multi-Service System. The system was previously determined to be reliable and no additional work was considered necessary.

STATEMENT OF AUDITING STANDARDS

We conducted this performance audit in accordance with generally accepted government auditing standards. Government Auditing Standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

AUDIT CONCLUSIONS

Based upon the test work performed and the audit findings noted below, we conclude that:

1. Meter readings entered in handheld meter reading equipment were accurately recorded in the Multi-Service System. The system calculated customer usage and billings accurately; however, the time between meter readings exceeded 62 days for 21% of the readings recorded during the audit period – most of these occurred during the November/December holiday season.
2. A statistical sample of 60 water meters was tested and 58 were found to be accurately recording water usage. Two of the meters were not working or recording usage.
3. Processes for identifying and resolving exceptions detailed in system reports need improvement to help prevent high bills from being generated and mailed to customers.
4. Complaint investigation documentation needs improvement.
5. While we found no conclusive evidence indicating that meters were systematically not being read, the control environment over meter reading activities needs to be strengthened and the efficiency of reading the routes should be improved.

While the findings discussed below may not, individually or in the aggregate, significantly impair the operations of the Water Department, they do present risks that can be more effectively controlled. Before we issued this report, Water Department personnel implemented some of the Internal Audit Department's recommendations.

DAYS OF SERVICE

AUDIT ISSUE

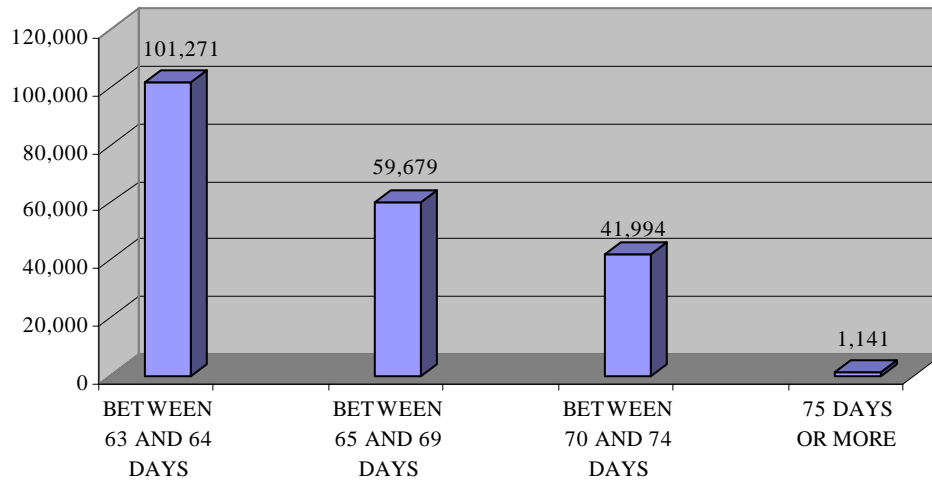
The number of days of service in billing cycles frequently exceeded the Water Rate Schedule authorized by Resolutions 2007-753 and 2010-339.

OBSERVATIONS

Sixty (60) meter readings were traced through Radix (application used for routing and to record meter readings) and the Multi-Service System (application used to calculate usage and billing). While meter readings recorded in Radix were accurately uploaded to the Multi-Service System and usage and billing were accurately calculated, the days of service (days between meter readings) ranged from 63 to 73 days (bi-monthly accounts).

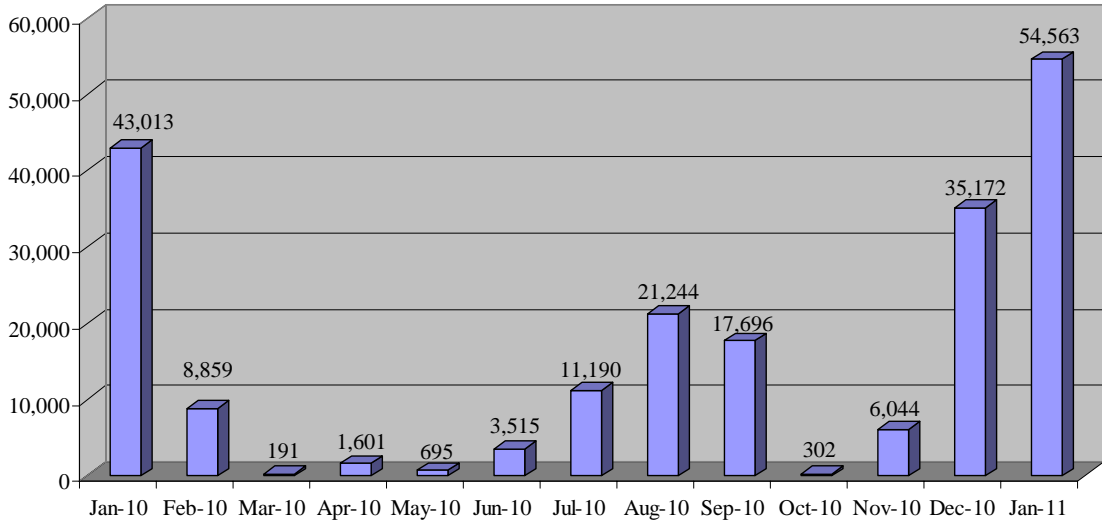
The result of the billing cycles exceeding 62 days (two months) was to increase the volume of water included in the monthly bill, without the associated pro-ration of the lower tiers and, for some high users, cause the additional days of service to be billed at a higher tier rate.

Due to the results above, test work was expanded and an analysis was prepared of all 956,403 meter readings recorded during the 13-month audit period. The analysis showed that 21.3 percent of meter readings exceeded 62 days between reads. While 49.6 percent of these were only one or two days late, 49.8 percent were between 3 and 12 days late. Readings with 75 days or more between readings were considered outliers. These anomalies resulted from new accounts being opened, etc.



Days between Readings > 62 Days

A second analysis revealed that the days between readings increased substantially during December 2010 and January 2011 with 44 percent of the readings exceeding 62 days between readings occurring during this time frame. If the January 2010 activity was removed from the analysis, over 55 percent of the late readings occurred during this period.



Days between Readings > 62 Days (by month)

CRITERIA

The current Water Rate Schedule, established by Resolutions 2007-753 and 2010-339, is based on usage per month (28 to 31 days).

RISK DESCRIPTION

Because the tier rate system is based on monthly usage, the extended time between meter readings without pro-ration of the associated lower tiers could place customers into a tier rate higher than warranted.

RECOMMENDATION 1

The time between meter readings should coincide with the Water Rate Schedule or usage should be *programmatically* adjusted *during the bill calculation* to ensure billing complies with the Water Rate Schedule.

MANAGEMENT'S RESPONSE

We agree. Billings while under the current bi-monthly schedule will coincide with the Water Rate Schedule. Under extenuating circumstances should the schedule be compromised, it is not feasible to adjust usage to thousands of customers in a cycle within the brief window of allowable time before billing. *Since we will be transitioning to monthly readings and billings and eliminating most bi-monthly estimates, the impact of extended cycles should be reduced.* Additionally, we will develop a bill insert and have it available for use in order to explain to customers that the billing days were outside the range for a particular billing period.

MULTI-SERVICE SYSTEM DROPOUT REPORTS

AUDIT ISSUE

The Multi-Service System (MSS) dropout reports were not being used effectively to identify and resolve questionable water meter usage prior to customer accounts being billed.

OBSERVATIONS

A random sample of 60 accounts was selected from the MSS Report 995 – “Meter Read Dropout” to review for any actions taken regarding the request of a "re-read" of the meter. Accounts are included on the MSS Report 995 because the reading fell outside the parameters of – “*4 times the average use + 25 ccfs*” and could have been mis-read. Of these 60 potentially misread accounts, there were only 31 accounts identified by the Customer Service Representative as requiring a review by the Field Technician. Based on the MSS Report 993 – “Required Field Reread Report,” two of the 31 meters had recently been installed, but the account in MSS had not been updated by the Safety Support and Consumer Services Section and two meters resulted in a re-read that was higher than the original read and therefore not used.

For the remaining 27 accounts, the following was noted:

- For 19 accounts – there was an average of 13 days elapsed after the request date (MSS Report 995) and 7 days after the account's billing cycle date before the re-read (MSS Report 993) was provided.
- For 6 accounts – a re-read was provided, but was not entered in MSS. All of the re-reads occurred after the accounts billing cycle date.
- For 2 accounts – the MSS Report 993 re-read report was not dated by the Field Technician.

CRITERIA

Accuracy of billing is based on proper and timely information related to meter reads.

RISK DESCRIPTION

The lack of accurate meter reads could result in a loss of revenue or high bills because the customer is billed at an "estimated" (average) usage rather than actual usage.

RECOMMENDATION 2

The current process for reviewing accounts that appear on the MSS generated “dropout reports” should be revised to include identifying the length of time an account is unresolved (awaiting a re-read). Additionally, for various "ages" that an account is unresolved, an aging report should be developed for review by appropriate Management to ensure awareness of, and that appropriate action is taken concerning the number of outstanding / unresolved billing issues.

MANAGEMENT'S RESPONSE

We agree. There is currently no report available, but there is a section in MSS called the “Run” area that shows outstanding work to be completed, and this area is reviewed by supervision. We have reviewed re-read turn around time with meter reading leadership and agree that re-reads will be completed within the allowable billing window.

METER READER/ROUTE IDENTIFICATION

AUDIT ISSUE

Meter Readers were not consistently logging into their handheld devices with a unique identifier. The manual documentation supporting route assignments and the efficiency of the reading of routes should be improved.

OBSERVATIONS

Radix, a utility management system used for route management and to record meter readings, interfaces with the Multi-Service System, which is used for maintaining customer accounts and for billing. Early during the audit period, the Meter Readers were not identifiable because they were not required to enter a unique identifier into the field provided when logging into their handheld devices. Later during the audit period, they were asked to enter their first names, but did not do so consistently. Also, handheld devices time out when inactive, but Meter Readers were not consistently re-entering their names. Finally, names longer than five (5) characters could not be handled by the interface between Radix and MSS and the entries were converted and recorded in MSS as a series of asterisks.

In order to identify the Meter Readers completing the tested routes, route assignments sheets were obtained from the Meter Reader supervisor. Route assignment sheets were developed in advance and based on billing cycles. The route assignment sheets were then edited based on the number of Meter Readers working that day and the carry-overs from routes that were not fully completed on previous days. A single day's activity typically appeared on two or more route assignment sheets because of absences and carried-over routes.

CRITERIA

Entering user identification and improving supporting documentation for route assignments are basic internal controls. Routing enhancements are efficiency/effectiveness measures.

RISK DESCRIPTION

Without unique identifiers for the Meter Readers being recorded in the system, accountability is reduced and monitoring of employee productivity is difficult. Reorganizing the routes should improve the efficiency and effectiveness of the meter reading process and thereby reduce costs.

RECOMMENDATION 3

Management should require Meter Readers to enter their employee identification number when logging into their handheld devices. To help ensure routes are prioritized properly, the current route assignment sheet should be replaced with 1) a standardized schedule detailing the billing cycles and associated routes and 2) a daily assignment sheet detailing the routes assigned to each Meter Reader. Because of reductions in resources and increases in workload requirements, and to improve efficiency, consideration should be given to reorganizing the routes so that a single route equates to one full day's workload.

MANAGEMENT'S RESPONSE

We agree. This issue has already been addressed. Meter Readers are required to enter an identification that is specific to each reader. Work has already begun on resequencing meters within a route for better reading efficiency where appropriate. Also, routes are being

rebalanced within cycles so that there is a more productive meter count in each route and work is spread more equitably.

METER READER ROUTES

AUDIT ISSUE

Meter Readers are assigned to the same routes for extended periods of time.

OBSERVATIONS

Based on interviews and documenting the meter reading process, Meter Readers are primarily assigned the same routes for extended periods of time. The City's Meter Readers generally would not have a different route unless they were covering for another Meter Reader. Newer Meter Readers had varying meter reading routes or had partial routes from other Meter Readers. Per discussion with Hillsborough County, their Meter Reader's assigned routes are rotated every month.

An analysis was performed on times between meter readings. The results indicated that the City's Meter Readers averaged between 41 and 75 seconds between readings. Hillsborough County stated that on its easier routes, readers averaged between 23 and 38 seconds and on its difficult routes, averaged between 54 and 64 seconds.

CRITERIA

Best practices for internal control would indicate periodically rotating Meter Readers on different routes.

RISK DESCRIPTION

Meter Readers could become complacent reading the same meters for an extended period of time. While reading efficiency may initially suffer by rotating the routes, as the readers become familiar with their new routes, efficiency should improve.

RECOMMENDATION 4

We recommend that route assignments be periodically rotated between Meter Readers.

Additionally, to improve the efficiency of reading the routes, the system documentation identifying the location of the meters on the customer's property needs to be scrubbed and updated. This will help facilitate the rotating of route assignments and the timely reading of meters.

MANAGEMENT'S RESPONSE

We agree. This change has already been implemented. Meter Reading leadership has put in place the practice of rotating meter readers to new and different routes every 2-3 months.

METER READING ROUTE SHEETS

AUDIT ISSUE

Meter Reader route sheets are not returned at the end of the day.

OBSERVATIONS

Meter Readers are given a paper copy of their route each day with their handheld device. The handheld has all the information for the route downloaded into it. On occasion the Meter Readers will make notes on the route sheet. The Meter Readers will on occasion use the paper copy of the route sheet to record readings if their handheld malfunctions during the day. The Meter Readers will then record the readings into a working handheld in the office at the end of the day.

CRITERIA

Handhelds have all of the information needed to complete the route.

RISK DESCRIPTION

Paper copies of the report may be used to record historical reads on the property and provide the opportunity to inappropriately estimate reads in the future.

RECOMMENDATION 5

Route sheets should be returned at the end of the day. We noted that prior to the completion of our report the Water Department management no longer provides the Meter Readers with copies of their route sheets.

MANAGEMENT'S RESPONSE

We agree. We have implemented a change in this area. Meter Reading leadership has been instructed to print the route sheets the evening before in the event the system crashes overnight or the morning of the scheduled reading and to hold onto the paper routes. If there are no issues, they are to destroy the paper route sheets at the completion of the route. Therefore, the route sheets do not go out with the meter readers in the field unless there is a system breakdown or there is a problem with the handheld units.

MSS REPORT 993 - REQUIRED FIELD REREADS

AUDIT ISSUE

The Multi-Service System (MSS) dropout report provided information regarding an account's previous read.

OBSERVATIONS

It was noted that the MSS Report 993 – “Required Field Reread” has a column that includes the last recorded reading for the meter. This is the data that the Field Technician was requested to confirm.

CRITERIA

Accuracy of a re-read relies upon the Field Technician observing the meter and recording the data independently of knowledge of the meter's prior reading.

RISK DESCRIPTION

The ability to document "estimated" reads is increased if the prior read is on the report.

RECOMMENDATION 6

Management should remove the "LAST READ" column from the MSS Report 993 – “Required Field Rereads” to ensure that the meter is used as the source for the reading.

MANAGEMENT'S RESPONSE

We agree. *A request will be turned in to Technology and Innovation (T&I) to remove the “last read” column from report 993.*

MULTI-SERVICE SYSTEM EXCEPTION REPORTS

AUDIT ISSUE

The Customer Service Representatives did not always document average customer usages input as an override to a "pending" reading.

OBSERVATIONS

In reviewing the documentation for clearing items that appeared on the exception reports, it was noted that the Customer Service Representatives did not always document the "readings" used to determine an average usage for customers. These average usages were the basis for entering a manually estimated reading, which would result in the billed usage for a customer.

This review also identified that any "over-rides" removed the original Meter Reader's identification and reading data, which eliminated the account's historical information related to who read the meter as well as the reading data.

CRITERIA

Manual entries that override system generated calculations should be documented and the original data entered retained.

RISK DESCRIPTION

Inaccurate readings could result in under- or over-billing of an account.

RECOMMENDATION 7

The process for resolving exception reports should be improved to require documentation to support any manually estimated readings entered by the Customer Service Representatives that change the billed usage.

Also, the original data entered and the Meter Reader that obtained the reading data should not be deleted but retained.

Additionally, reporting should be provided for Management's review that identifies over-ridden data by Meter Reader who's reading is over-ridden and by the Customer Service Representatives over-riding this information, to allow analysis of trends and identify those Meter Readers who need improvement.

MANAGEMENT'S RESPONSE

We agree. We have established standardized criteria. For residential accounts we will use projected usage (14 month calculation). For non residential, any analysis used will be entered into the remarks section in MSS to clearly document the rationale for the calculations. Because of the limitations in MSS, in order to retain the original meter reading information which appears on a top line, that information will be re-entered onto the second line to retain the history, and the new calculation information will appear on the top line in order for MSS to extract for billing purposes. We will pursue creating a template of a new high bill investigation document in MSS to be used in all customer inquiry situations. A request will be made to T&I.

HIGH BILL INVESTIGATIONS

AUDIT ISSUE

Documentation to support resolution of “high bill” complaints investigated requires improvement.

OBSERVATIONS

Complaint files for a judgmentally selected sample of 42 complaints received from Tampa Palms, Dana Shores, and the Lake Magdalene service areas were reviewed to determine if adequate documentation was maintained to support their resolutions. The review identified that nine (9) requests were pending resolution. For the remaining 33 accounts, it was noted that:

- Sixteen (16) files did not contain the initial complaint, the High Bill Investigation Checklist, receipt from customer indicating leak repaired, or an evaluation by the Billing Section.
- Five (5) files did not contain documentation of why the account did not qualify for an adjustment. Frequently, only a note on the file of "no adjustment" was observed.
- Three (3) files documented an adjustment; however, documentation to validate there was a leak was not included.
- Three (3) files indicated the accounts were to be adjusted; however, at the end of fieldwork, the adjustment was not recorded in the MSS.
- Five (5) files contained printouts of the customer account history, but no documentation of average usage or other notation to indicate review for excessive billing.

Of the 33 complaints reviewed, 10 resulted in credits issued. A review of the calculations for the 10 credits issued identified 4 accounts that had an incorrect amount issued. Each incorrect credit issued was in the customer’s favor by an average of 22%.

Also, our follow-up with customers resulted in many commenting that they were not kept informed of the status or progress of their requests.

CRITERIA

Prudent business practices require adequate documentation to support any monetary adjustments affecting customers’ accounts. Customer credits issued should be reviewed for accuracy.

RISK DESCRIPTION

Loss of revenue could occur for un-supported or inaccurate monetary adjustments.

RECOMMENDATION 8

The Water Department should ensure that all resolutions of complaints received are properly supported and documented.

The process for re-calculations of billing adjustments should be reviewed for adherence to City Code and the Council approved rate structures. Additionally, re-calculations should be automated in order to reduce the possibilities of errors.

To develop more responsive customer service, follow-up with customers on the status of their investigation should occur at least every 30 days until the complaint / investigation has been resolved.

MANAGEMENT'S RESPONSE

We agree. Calculations will be done using the existing “bill calculator” program that is available. During times when affected bills overlap a change in rates, the calculations will need to be supplemented with a manual calculation since the program does not take rate changes into account.

Though not followed during the High Bill Event in January, February, and March due to the high volume, a new HBI process was put in place in late 2010 (see attached flow chart Exhibit A) that improves the follow up communication with customers during the process.

MAIL-IN READ PROGRAM

AUDIT ISSUE

The Mail-In Read Program is not adhering to the established mail-in read policy.

OBSERVATIONS

The Mail-In Read Program was designed to only be available for those customers whose meters are not accessible to the Meter Reader. The customer is sent a set of six cards to mail in their meter reading on a bi-monthly basis. The policy requires that the meter be inspected once every 12 months to confirm the reasonableness of the mailed in readings.

Per our interviews and discussions, the policy was not being followed – customers were allowed to opt into the program for mail-in reads even if their meters were accessible, and the associated water meters were not being inspected by City Meter Readers annually. The issue of annual water meter verification was also reported in Audit 09-02, Utility Accounting Division, issued September 28, 2009.

CRITERIA

Mail-in read account maintenance should adhere to the mail-in read policy.

RISK DESCRIPTION

Allowing accessible water meters to be included in the mail-in read program increases clerical processing costs. If mail-in reads are not verified annually, readings may be incorrect and could result in a loss of revenue. It is also possible that leaks would not be discovered in a timely manner.

RECOMMENDATION 9

We recommend the Mail-In Read Program adhere to the established policy. Additionally, replacing meters that are not accessible with meters that are accessible and easily read by Meter Readers should be included in the Water Department's annual plan. This should help reduce overall costs and increase meter reading efficiency.

MANAGEMENT'S RESPONSE

We agree. A program is being developed to 1) identify difficult to access meters for the purpose of assessing which ones require a coordinated relocation. 2) Identifying which customers who are on the mail in program *and* no longer have a meter that is difficult to access and notifying them of our intent to transition them to monthly reads this fall. For those that are required to stay in the program, gain access to a physical read twice a year.

METER READER STAFFING

AUDIT ISSUE

The Meter Reading Section may not be appropriately staffed.

OBSERVATIONS

Tests performed showed a considerable number of accounts where the time between the reads was greater than 62 days (see Finding on Page 4). Per our interviews, the meter reading staff was reduced from 13 to 11 during the consolidation of Utility Accounting into the Water Department. In addition, one Meter Reader had been dedicated to re-reads and was not assigned a regular route. Per our interviews, the current work load and staffing level does not allow the supervisor to perform any field supervision of the Meter Readers' activities. In addition, during the accuracy tests performed on water meters, many of the meter boxes were found with substantial amounts of debris and dirt covering the meter.

CRITERIA

Good business practice is to provide the necessary resources to manage the workload in a manner that ensures timeliness, efficiency, and good customer service. Monitoring field activity may help prevent errors and help the supervisor address issues proactively. Staff levels should be established based on workload and consideration of absences for vacations, sick time, workers compensation, etc.

RISK DESCRIPTION

If the Meter Reading Section is not appropriately staffed, the meter reading process can fall behind and customers may not be billed for the appropriate time period each cycle. Meters covered with substantial amounts of debris and dirt impedes reading accuracy and efficiency.

RECOMMENDATION 10

Staffing levels should be analyzed to ensure routes and cycles are completely read on time to support timely billing, and allow adequate resources to perform meter box maintenance, and provide appropriate field supervision.

MANAGEMENT'S RESPONSE

We agree. A request for bid is being prepared for the purpose of soliciting 3rd party providers that can be incorporated into the staffing strategy and these anticipated costs have been identified in the FY 2012 budget request. We have also requested (4) new positions in the FY 2012 budget for meter related maintenance.

METER RE-READ SELECTIONS

AUDIT ISSUE

Meter re-read selections are not always selected based on standard, consistent criteria.

OBSERVATIONS

Complaints may originate when customers receive a high bill that they are not expecting. System exception reports attempt to identify unusual usage. A form of triage is performed by reviewing account usage histories before committing resources for field investigations. If it is determined that the high usage is within acceptable parameters, an override is entered which allows the billing process to continue. In these cases, no contact is made with the customer.

When the usage can not be explained by the triage, a re-read is requested. Re-reads are the “checks and balances” of the meter reading program. Per our interviews, there was a period after the meter reading consolidation under the Water Department when re-reads for high bills were reduced and in some cases eliminated.

CRITERIA

Best practices for good customer service and accurate billing indicate that analysis of exceptions should be performed based on documented, standard, consistent criteria.

RISK DESCRIPTION

Customer complaints are generated when an unexpected high bill is received. If re-reads are not selected consistently and/or not performed, a customer may be over-charged.

RECOMMENDATION 11

During the triage efforts, consideration should be given to contacting the customer to inquire about their current high water usage. Meter re-read selections should be selected based on documented, standard, consistent criteria.

MANAGEMENT'S RESPONSE

We agree. This issue has already been addressed. Minimum criteria for re-read selection was established with a new procedure in late 2010. (See attached Exhibit B)

METER READING

AUDIT ISSUE

Meters should be read monthly.

OBSERVATIONS

City of Tampa, Code of Ordinance, Section 26-28(c), states “Whenever reading of the water meter and/or reclaimed water meter on a monthly basis is not provided, the city shall have the authority to bill a customer for water, reclaimed water, and/or wastewater charges on an average basis.” The Ordinance does not preclude the City from reading meters on a monthly basis. Based on our review, meter reading on a monthly basis may help resolve many of the water bill related issues.

CRITERIA

Reading meters on a monthly basis would eliminate the estimation process and provide for more accurate billing.

RISK DESCRIPTION

When water meters are not read monthly it provides the opportunity for leaks to continue without detection and may increase the possibility and magnitude of errors.

RECOMMENDATION 12

Water meters should be read on a monthly basis.

MANAGEMENT'S RESPONSE

We agree. Management has already decided to transition to monthly reading by October 1, 2011.

SERVICE ORDERS

AUDIT ISSUE

An aged listing of service orders from MSS is not available.

OBSERVATIONS

Based on the review of the information throughout the audit process and the MSS system, there was no monitoring report which summarizes service orders in an aging format. Concern was expressed from the Meter Reading Section that service orders they requested were not being completed in a timely manner. Service personnel asserted many of the work orders they received were without merit. In the process of the interviews, it was noted and verified that staff were instructed to communicate service requests via the email system. By using the email system, controls to properly track service activity on customers' accounts and help ensure timely resolution of the problems were weakened.

CRITERIA

Best practices for internal control would indicate maintaining an aging of service codes and maintenance requests in order to provide timely and efficient meter servicing.

RISK DESCRIPTION

Service orders may be missed or not completed in a timely manner in accordance with policy.

RECOMMENDATION 13

All work requests should be entered in MSS. An aged listing of service work orders should be created and used to ensure timely and adequate work order resolution.

MANAGEMENT'S RESPONSE

We agree and a request will be put into T&I to design a report that can accomplish this.

RADIX SYSTEM

AUDIT ISSUE

Access to the Radix application, which is used for routing and to record route assignments and meter readings, is not password protected.

OBSERVATIONS

The Radix application resides on a stand-alone computer, which does not require a separate user identification or password to gain access to the Radix system. To access the program, only a network user identification and password are required. Two employees are authorized to access the Radix application. While they stated that they log off the computer whenever they leave the office for any reason, access to the computer is not sufficiently secure.

CRITERIA

Application controls, such as requiring unique login identifications and passwords, are a basic standard computer industry control technique used to safeguard data from unauthorized access.

RISK DESCRIPTION

If the computers were left unattended and were not logged off, someone could gain unauthorized access to the data recorded in the Radix application.

RECOMMENDATION 14

The Radix application should be protected from unauthorized access by implementing password security measures.

MANAGEMENT'S RESPONSE

We agree and will work with Radix to correct this.

CELL PHONES WITH GPS TECHNOLOGY

AUDIT ISSUE

Cell phones are not provided to Meter Readers who are away from their trucks for extended periods.

OBSERVATIONS

Meter Readers must call the office using their own personal cell phones.

CRITERIA

Employees in the field should be provided with the equipment to ensure their safety and an ability to contact their department in an emergency.

RISK DESCRIPTION

The use of city issued cell phones would help ensure reliable communications for the Meter Readers. Also, utilizing GPS capable cell phones, would enable tracking the location of the Meter Readers and help ensure their assignments are completed properly.

RECOMMENDATION 15

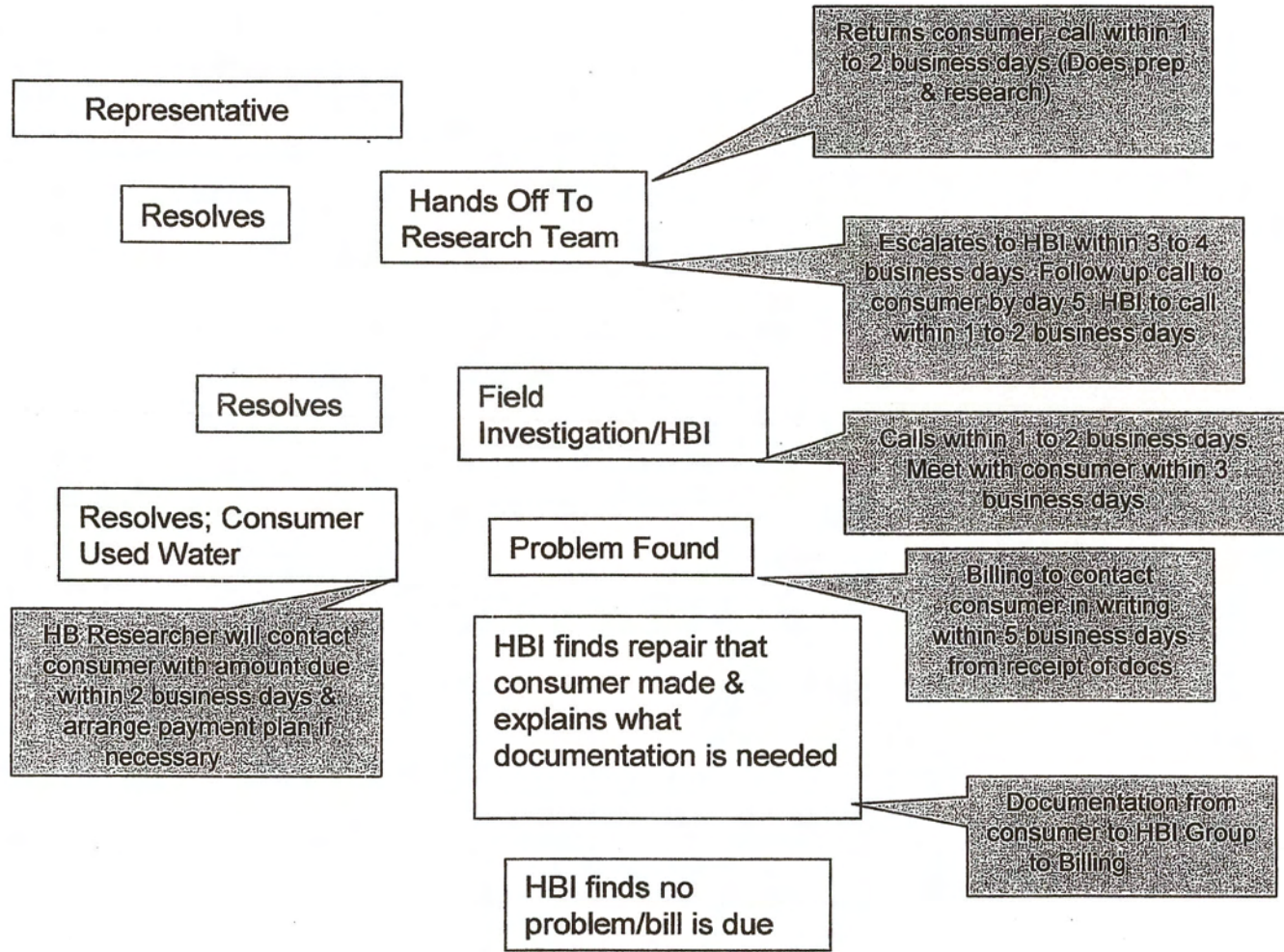
Management should ensure employees can be reached at all times when they are in the field by providing equipment that can be carried by the Meter Readers. Additionally, consideration should be given to providing cell phones with GPS capability to provide a method for tracking and locating the Meter Readers, if necessary.

MANAGEMENT'S RESPONSE

We agree. This was already implemented. Meter readers have been issued city cell phones.

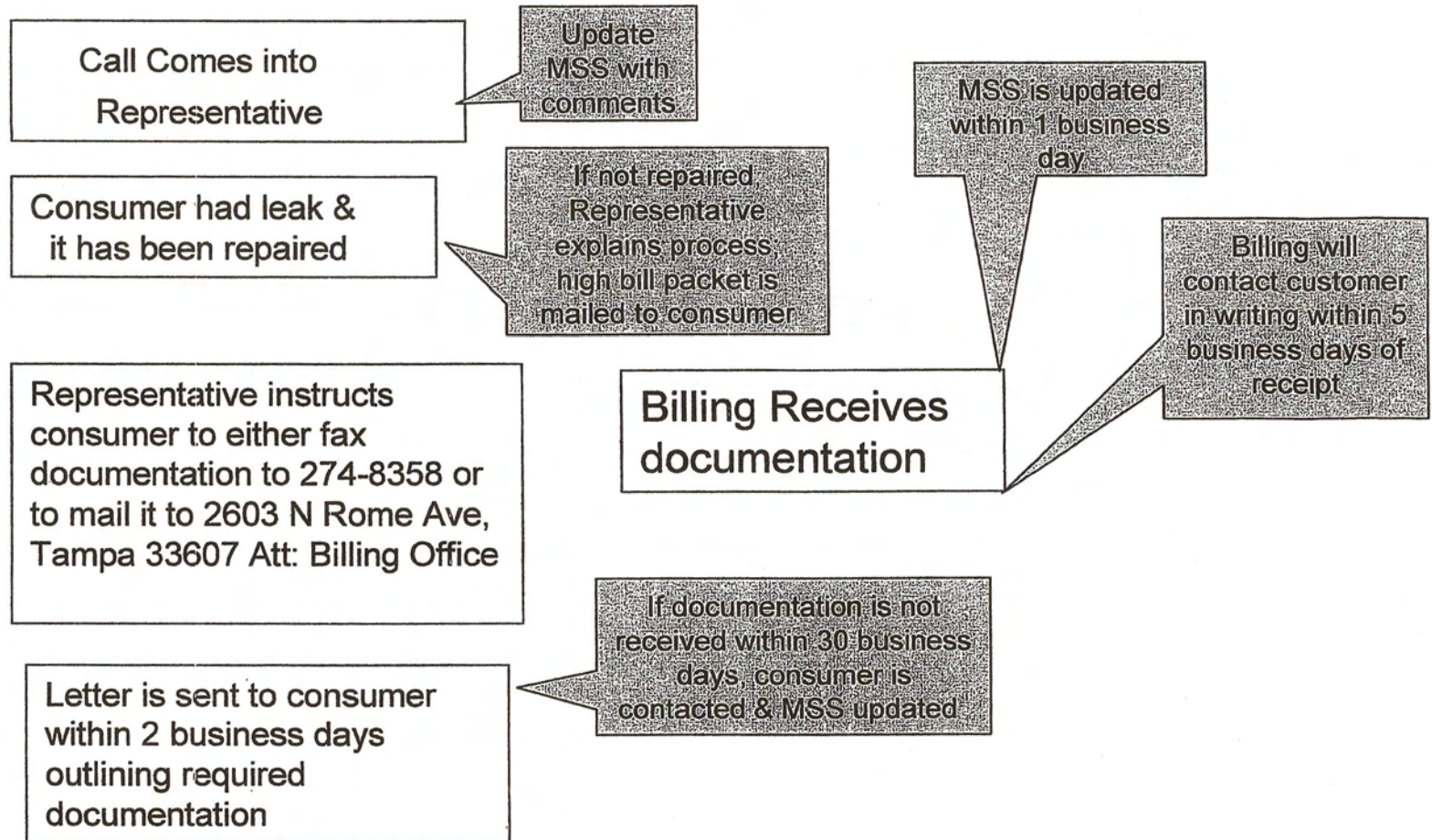
A

High Bill Investigations (HBI)



A1

High Bills Due To Leaks





CITY OF TAMPA

Pam Iorio, Mayor

Water Department

Water/Wastewater Leak Adjustment Request Form

This form is not a guarantee that a credit will be applied to your utility bill. You will be notified by phone or letter if the request cannot be granted, or if additional information is needed. Only one adjustment will be allowed during a twelve consecutive month period and will only occur after all leaks have been repaired and verified with an actual meter reading. The City of Tampa Water Department's water rates are billed in a multi-tier rate structure. For more information on the rate structure, please visit our web site at www.tampagov.net/waterrates. When determining the credit, we compute your average annual water consumption and recalculate all water use above the average at the lowest tier based on your water classification. If your utility account does not have at least one year of history of water consumption, it may not be possible to review your account for a credit until such time as a "normal use" history is available.

Customer Name: _____ Account #: _____

Service Address: _____ Contact Phone #: _____

Type of Leak: Irrigation ___ Toilet ___ Pipe ___ Other _____

Date Leak Occurred: _____ Date Leak Repaired: _____

Required Documentation:

Copy of repair invoice attached (if repaired professionally) Yes ___ No ___

OR

Copy of repair receipts attached (if repaired by owner/tenant or agent) Yes ___ No ___

Brief description of leak and action taken to repair attached Yes ___ No ___

Please return this form and documentation to:

City of Tampa Water Department/ Billing Section 400D1
 2603 N. Rome Avenue (not accessible to the public)
 Tampa, FL 33607
 Fax: (813) 274-8358

Depending on the type of leak, the period of time it may have affected your bill, and the total amount of the credit the City of Tampa is able to provide, you may need more than one month to bring your account to a current status. If this is the case, please contact the Credit Section at (813) 274-8780 to make payment arrangements.

Please feel free to contact the City of Tampa Utilities Call Center at 274-8811, if you have any questions.





CITY OF TAMPA

Pam Iorio, Mayor

Water Department

EXHIBIT B

Date: December 15, 2010
To: Maria Barahona, Troy Lorenz, Marion Sell
From: Ron Calderoni and Vicki Regar
Re: Pre-Billing Selection Criteria For Highs and Lows

The determination on whether to send a low or high drop-out read into the field for verification will be made by the Billing Department. The objective is to eliminate the need to verify a reading the meter reader has already verified and to clarify under what circumstances we will request an additional reading on the Low and High drop-outs.

Lows

Based on size, type of meter and prior usage history, select for reread based on the following criteria:

- After review, and accounting for seasonal changes, there has been a **significant** drop in usage with no other indication of vacancy

Highs

Based on size, type of meter and prior usage history, select for reread based on the following criteria:

- Reading has an extra digit and not inline with past history.
(Prior Reading 0450.00 – Drop-out Read 1467.00)
- Reading appears to be transposed.
(Prior Reading 1450.00 – Drop-out Read 4167.00)
- Reading inline with meter or register previously removed
(Prior 0450.00 – Meter Replaced set at Zero – Drop-out Read 0504.00 – Reader did not note different meter number.)
- Reading significantly out of line. Consumer's consumption history is consistent. There are no pending service orders (leak etc), customer remarks, location remarks, to support sending out this high of bill.
(Prior Reading 0450.00 – Drop-out Read 8197.00)