



DEPARTMENT  
Internal Audit Division

## INTERNAL AUDIT REPORT

TO: Kathie G. Brooks, Interim City Manager  
FROM: James J. Sutter, Internal Auditor  
*[Signature]*  
DATE: November 29, 2012  
AUDIT: Water and Sewer Impact Fees  
PERIOD: October 01, 2008 through September 30, 2010

This report is the result of a scheduled audit to verify that proper controls are in place to ensure the integrity, reliability, and accuracy of water and sewer impact fees assessed on new connections and meter upgrades to the water and sewer system.

### INTRODUCTION

The City of Miami Beach owns, operates and maintains the potable water system that serves the residents and businesses of the City. The water system consists of 157 miles of water mains ranging from 6 inches to 36 inches in diameter. Over 50% of these lines have been in service for over 40 years. The system contains six water booster pump stations and four ground storage tanks. The system also contains 958 fire hydrants, 622 fire lines and has over 23,000 valves of various sizes. There are 11,415 service connections which are all metered.

Because the City is located on a barrier island surrounded by salt water, it was not practicable or economical for the City to develop its own water supply system. The least costly and highest quality water in the area comes from the Biscayne Aquifer located on the mainland from wells owned and operated by the Miami-Dade County Water and Sewer Department. The water service to the City comes from four large diameter pipes located on each of the causeways. Each of the pipes is metered and the City is billed for the water passing through the four pipes at wholesale rates.

The City also owns, maintains and operates the sewer collection system. The system consists of 152 miles of lines, including gravity sewers and pressurized force mains. In addition, there are 23 wastewater pump stations. The sewer system is connected to the Central District wastewater treatment plant located on Virginia Key by way of a subaqueous 54 inch force main under Government Cut. The flow from this line is metered and is the basis for the charge to the City from the county for sewer treatment.

In relation to the mentioned infrastructure, the City of Miami Beach established water and sewer impact fees to all new connections to the water system and upgrades to meter sizes in order to help mitigate the cost of the increased capacity in the system as a consequence of the new connections and upgrades to meter sizes. Such impact fees are based on the size of the water meter serving such premises and are due and payable at the time of issuance of the initial building permit for the premises or upon submittal of the application to the public works department, in cases of installation of sub-meters. However, no sewer impact fees are charged for water meters installed and used strictly for irrigation or other purpose that does not generate wastewater returned to the sanitary sewer system. The following table helps to illustrate amounts collected for these fees during our audit period:

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| Impact Fees Accounts | FY 2009          | FY 2010         | Total            |
|----------------------|------------------|-----------------|------------------|
| Water Impact Fees    | \$73,820         | \$46,365        | \$120,185        |
| Sewer Impact Fees    | \$72,500         | \$52,370        | \$124,870        |
| <b>Total</b>         | <b>\$146,320</b> | <b>\$98,735</b> | <b>\$245,055</b> |

Note: Impact fees can be higher in periods of high construction activity.

## OVERALL OPINION

The Public Works Department is responsible for maintaining compliance and assessing the applicable water and sewer impact fees generated as a result of an increased capacity to the City's water system from new connections to the same. To that extent, the Public Works Department has successfully maintained compliance assessment, and collection of water and sewer impact fees resulting from new installation requests of water meters identified for domestic use. However, results from our audit reflect the following areas in need of immediate corrective action:

1. A new Water and Sewer Impact Fee fund should be created to improve accountability and controls over the restrictive uses of these funds.
2. Water impact fees were not collected on new installations and tapping for irrigation meters installed directly from the main water system.
3. Water meters are allowed to be installed on fire hydrants to provide water to construction sites without any impact fee being assessed and in contradiction to Section 110-40(d) and Section 110-45 of the City Code.
4. No reconciliation is being done between EDEN and Permits Plus regarding applicable impact fees.
5. Additional details, descriptions etc. should be added to permits plus to ensure the accuracy and correlation among all systems used and fees charged.
6. Sufficient documentation to provide adequate audit trails and/or verifiability of due diligence from the City's Public Works Department with respect to compliance to Ordinance No. 89-95 of the Miami-Dade County was not observed on all of the files reviewed, while clarification regarding the applicability of the Ordinance should be requested from the County to be uniformly and consistently applied.

Additional details regarding these areas in need of corrective action can be found on the "Finding, Recommendations, and Responses" section on this report.

## PURPOSE

The purpose of this audit is to ensure that proper controls are in place to maintain integrity, reliability and accuracy of revenues collected; verify that fees are billed in accordance to City Ordinances and timely; and review accountability and fund allocations to ensure compliance to provisions of applicable laws.

## SCOPE

1. Review internal controls and processes of assessing water and sewer impact fees for efficiency and effectiveness.
2. Verify that fees are billed in accordance to City Ordinances and timely assessed.
3. Review accountability, fund allocations, and fund usage to ensure compliance to provisions of applicable laws.

## FINDINGS, RECOMMENDATIONS, AND MANAGEMENT RESPONSES

1. Finding – *A new Water and Sewer Impact Fee fund should be created to improve accountability and controls over the restrictive uses of these funds.*

Code Sections 110-167 and 110-169, water impact fee and sewer impact fee correspondingly, of the City of Miami Beach Code require that all impact fees collected must be deposited into a corresponding water or sewer impact fee sub-account accordingly within the Water and Sewer Fund. Amounts received from these impact fees together with investment earnings and/or interest earned can only be spent to improve the capacity of the water and sewer systems. However, results from our testing show that although revenues received from these impact fees have been recorded in separate individual revenue general ledger accounts, funds accumulated over each fiscal year and/or the use and expenses from these accounts have not been accounted for and/or identified as required by the above referenced sections of the City Code. In addition, Internal Audit learned that limitations in the City's financial system (EDEN) do not allow setting up sub-fund accounts within the water and sewer fund. As a result a new fund for water and sewer impact fees would have to be created in order to implement the required accountability.

### Recommendation(s)

Considering the existent limitations in the City's financial system (EDEN), Internal Audit recommends creating a new water and sewer impact fee fund in order to maintain accountability of the expenses and the scope of work of projects to which these funds are allocated. In addition, since it is impractical if not impossible to be able to reconcile the beginning balance for this fund, it is recommended to start the fund with a zero balance and account for fund earnings and accumulated earnings going forward. Funds accumulated from these fees must only be used and/or spent in projects that help to improve capacity of the water and sewer systems according to the City Code.

### Management's Response(s)

The Finance Department has created a water and sewer impact fees fund (422) retroactively to 10/1/2011. This new fund will be consolidated with the other water and sewer funds for financial reporting purposes.

2. Finding – *Water impact fees were not collected on new installations and tapping for irrigation meters installed directly from the main water system.*

According to Section 110-167 of the City of Miami Beach Code, a one-time water impact fee shall be imposed upon all new connections to the water system and upgrades to meter sizes. Such water impact fee shall be based on the size of the water meter serving such premises as set forth in appendix A of the City Code.

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Although not defined on the applicable code section, "new connections to the water system" is interpreted by the Public Works Department as a new connection/tapping to the water main or the City's main water conducts/infrastructure. Accordingly, water impact fees are applied to secondary meters (irrigation meters, cooling tower meters, and pool meters) only if a new tap to the water main is created.

Using this information, Internal Audit further inquired about the actual installation procedure for secondary meters, particularly irrigation meters. As a result we learned that prior to October 1, 2009 all irrigation/pool secondary meters were installed as a new connection to the water system by creating a new tap to the water main. However, the department waived the required water impact fees if a notarized document titled "Affidavit for Existing Irrigation System to Exempt Water Meter Impact Fees" was filed with the Public Works Department. The affidavit requires the owners of the property where the meter is being installed to state that an existing sprinkler and/or swimming pool system was already installed in this property. No physical/visual verification or inspection was required to confirm the validity of the statement.

We further learned that subsequent to October 1, 2009, the meter installation procedure was changed no longer requiring a new tap to the water main (sub-meters). However, water meter installations following the old procedures effective prior to October 1, 2009 can still take place under special circumstances and is considered in individual case basis (Ex: Irrigation/pool meter with a different capacity as that of the domestic meter).

The following figures (figures A and B) have been provided as further reference to illustrate the different meter installation procedures followed prior to and subsequent to October 1, 2009. Figure A shows a diagram of meter installation procedures prior to October 1, 2009, while Figure B illustrates the meter installation procedures followed subsequent to October 1, 2009 for sub-meters:

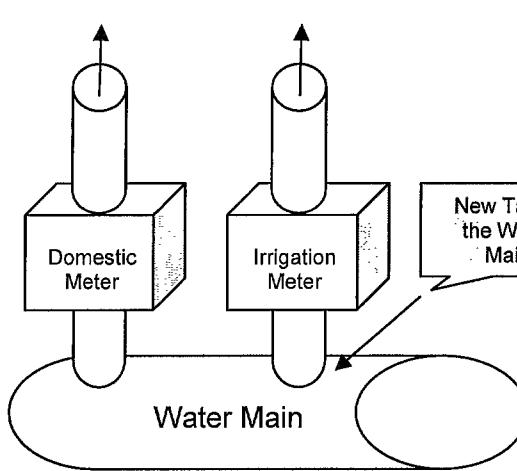


Figure A.

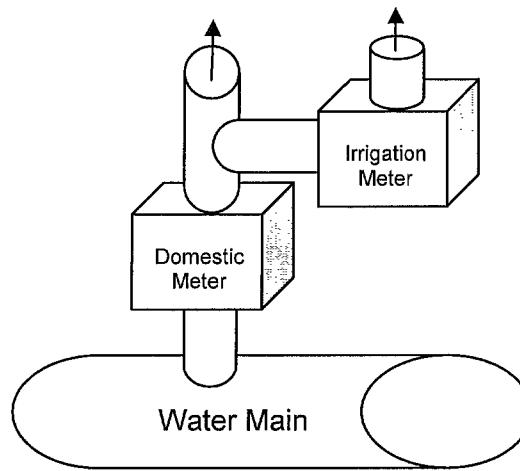


Figure B.

Considering that no exceptions to the assessment of water impact fees have been expressly stated under Section 110-167 of the City's Code, water impact fees should have been assessed to all irrigation and/or pool meters installed using the meter installation procedure described in Figure A. above. This is applicable to all irrigation and/or pool meters installed prior to October 1, 2009 and any other meter installed subsequent to October 1, 2009 following the previous meter installation procedures described in Figure A. above.

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From a total population of two hundred eighty-five (285) water meter installation requests during our audit period (October 1, 2008 through August 31, 2010), Internal Audit randomly sampled twenty-nine (29) or 10.18% of water meter requests for review. From this random sample, six (6) water meter installation requests involved the installation of irrigation meters for non-city projects prior to October 1, 2009. As a result, and based on the meter sizes, a total of \$3,945.00 should have been assessed and collected for water impact fees. However, these fees were waived as a result of owner affidavits being filed. Although waiving water impact fees for sub-meters installed on existing pools and irrigation systems from a water usage point of view is not impractical, impact fees are based and applicable to new connections to the water system. As a result, such waiver is in direct contradiction to section 110-167 of the City Code.

Recommendation(s)

At a minimum, going forward all sub-meters installed requiring a new connection/tap to the water system should be subjected to water impact fees according to the stipulations of the City Code. The department should consider whether or not retroactive billing is appropriate for those installations where a new tap to the water main took place without assessing the corresponding fees.

Management's Response(s)

In most instances, irrigation meters are installed as sub-meters (per Figure B above); therefore there is no tapping of the water main. Where this is not possible and an irrigation meter must be tapped from the water main (per Figure A above), an impact fee will be assessed. It is not believed appropriate to retroactively bill those who were not assessed the required impact fee.

3. Finding – *Water meters are allowed to be installed on fire hydrants to provide water to construction sites in contradiction to Section 110-40(d) and Section 110-45 of the City Code.*

Water meters are being allowed to be temporarily installed on fire hydrants to provide a water source to developers in their construction sites. According to the Public Works Department, no water impact fees are being assessed because fire hydrants are existing infrastructure and therefore not considered a new connection to the water system. Developers are only required to pay a deposit which is later applied to any balance in their account as a result of water used. Any remaining balance, if available, is refunded to the developer. However, the installation of water meters to hydrants and the temporary use of fire hydrants as a source of water to developments and construction sites are prohibited under section 110-40(d) of the City Code, which states that “*Contractors or any other consumer desiring water for temporary use shall not be allowed to use water from fire hydrants*”. Similar language is observed on section 110-45(b) and 110-45(c), which state that “*All fire hydrants shall be used for fire protection purposes only. All use of fire hydrants for sprinkling, sewer flushing, watering, filling of carts or receptacles and any other use of fire hydrants other than for strictly fire protection, meaning thereby extinguishing of fires or wetting down surrounding properties during a fire to prevent its spreading, is prohibited unless any such other use is permitted by the public works department and evidenced by a written permit signed by the director of public works, which permit shall be exhibited to any employee of the public works department*”.

It is further stated that “*Permits for use of water from fire hydrants for any purpose other than*

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*for fire prevention shall not be granted by the public works department except in cases where such use is deemed by the public works department to be urgent and other means of obtaining water are not available, but all permits so granted shall be revocable at the pleasure of discretion of the public works department in every instance and without regard or reference to any terms or provisions in such permits to the contrary notwithstanding". Similar restrictions are observed on Section 32-159 of the Miami-Dade Code.*

Twenty-nine (29) or 10.18% water meter installation requests were randomly sampled from a total population of two hundred eighty-five (285) water meter installation requests during our audit period (October 1, 2008 through August 31, 2010), as previously stated in finding number two (2) above. From this random sample, six (6) or approximately 21% were water meters installed to fire hydrants.

Consequently, continuing to allow the temporary use of fire hydrants as a water source by developments, construction sites, or any other use constitute a direct violation of the City Code.

**Recommendation(s)**

Although the installation of water meters to and usage of fire hydrants has been considered a standard practice by the Public Works Department and according to the Public Works Department, in other municipalities as well due to the easiness and practicality of the method, it constitutes a possible violation of the City of Miami Beach Code and should not be allowed. Any currently installed water meter on a fire hydrant should be removed immediately in order to comply with the stipulations of the City Code Sections cited in the finding above.

**Management's Response(s)**

Installation of temporary water meters to fire hydrants is preferred to a connection via tapping a water main. Taps on old pipe can cause failure of that pipe. Taps are also potential sources of leaks and are not easily observed and identified when buried. Temporary taps must also be repaired, and these repair points can be a source of future pipe failure. Finally, connections to existing water mains require sidewalks and streets to be excavated, repaired areas often have differential settlement and contribute to a decreased lifespan for a road.

In contrast, meters on hydrants do not create these issues. They are also easily installed and easily removed. Should a hydrant be needed for fire-fighting purposes, a meter can be quickly removed. Further, significant standards and practices have developed in the past 50 years which makes the restrictive nature of hydrant use obsolete.

As a result, the Department will take the appropriate action to amend applicable sections of the City Code to allow temporary meters to be connected to fire hydrants through a guarded permitting process that includes backflow protection and provisions for repair/replacement of damaged fire hydrants.

4. **Finding – Reconciliation between EDEN and Permits Plus regarding applicable impact fees is not being done.**

Amounts reflected as paid for water and sewer impact fees on Permits Plus are not reconciled to amounts reflected/posted in the City's Financial System (EDEN). Considering that these programs do not interface with each other, there is currently no verification process to ensure that amounts reflected as received on Permits Plus correlate to those actually processed and deposited by the cashiers to the proper corresponding account.

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Recommendation(s)

Reconciliations of amounts received by the Public Works Department, reported on the Permits Plus, to amounts received and/or processed by the Finance Department, reported on the City's financial system should be performed monthly at a minimum. Reconciling these amounts should help in identifying any discrepancies and/or possible miss-postings to be researched and corrected in a monthly basis, as well as ensuring the accuracy, reliability, and correlation of amounts reported on both, Permits Plus and EDEN.

Management's Response(s)

The City is implementing a new permitting system, Accela, which will perform this function; this system is scheduled to be operational for the Public Works Department by end of second quarter FY 2012/13.

5. Finding – Additional details, descriptions etc. should be added to Permits Plus to ensure the accuracy and correlation among all systems used and fees charged.

The Public Works Department currently uses two different systems to document the water meter installation process. The first system is Permits Plus, which is used to document the initial request and work description regarding the meter being installed, as well as calculating, assessing, and recording the applicable fees. The second system is Cityworks, which is used to document the work orders, work details regarding location where work is being performed and the resources allocated to the work being performed. In addition, copies of supporting documentation from both systems, as well as external documents such as affidavits, power of attorneys and/or agency agreements, among others, are kept in file as an office copy for future reference if needed. However, as a result from our audit, we found that very little information was being added and kept on Permits Plus to facilitate audit trails regarding the work being performed and cross-references among the systems used to document the work being done. Internal Audit observed how meter sizes and/or uses (Ex: irrigation, cooling tower, domestic) as described in Permit Plus did not coincide with the description documented in the office copy package and documents from Cityworks. In addition, fields recognizing work starting, finishing, and meter installation dates were not filled in Permits Plus.

Recommendation(s)

In order to maintain correlation, improved verifiability and audit trails, additional information and descriptions should be added to the Permits Plus system. Some of the additional details should include work order reference/request number, building permit number, correct size of meter being installed, references to diagrams/plans of meter installation, meter installation date, work completion date, and any other relevant information whenever applicable. Implementing this recommendation should help to improve verifiability, reliability, and completeness of supporting documentation.

In addition, the Public Works Department should consider the electronic storing of supporting documentation and office copies instead of printing hard copies and filing them to later be sent to storage in boxes. Scanning the documents and creating soft copy files could contribute to a lower storage cost as well as an improved accessibility.

Management's Response(s)

Public Works will include additional details and supporting documentation in the Permits Plus system and will scan documents in lieu of printing hard copies.

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6. Finding – *Sufficient documentation to provide adequate audit trails and/or verifiability of due diligence from the City's Public Works Department with respect to compliance to Ordinance No. 89-95 of the Miami-Dade County was not observed on all of the files reviewed, while clarification regarding the applicability of the Ordinance should be requested from the County to be uniformly and consistently applied.*

According to Ordinance 89-95, Section 1, water and sewer connection charges shall be imposed on and collected from new retail users furnished water service, sewer service, or both by volume customers (the City) of the Miami-Dade Water and Sewer Authority Department. For purposes of this Ordinance, "new retail user" was defined as any user who applies to a volume customer (the City) for water service, sewer service or both; or an existing user who applies for increased water service, sewer service or both. Increased service may result from a new building, an addition or renovation to an existing building, or any other use requiring increased water service, sewer service, or both.

Later, Section 5 of the same Ordinance states that connection charges shall be collected by one of two methods:

1. The City may collect on behalf of the County may collect the connection charges or;
2. The new retail user applying to the volume customer may pay the connection charges directly to the County, subject to approval of the City.

The choice of either of these two methods of collection shall be determined at the option of the City, but only one method shall be allowed during any County Fiscal Year.

Moreover, Section 8 states that a volume customer (the City) shall not render water service, sewer service, or both to any new retail user until either the connection charges are paid to the City or a written receipt from the County is provided to the City.

Considering that the City's Public Works Department uses the second method described above, Internal Audit reviewed six (6) of the twenty-nine (29) sampled meter installation requests, which were identified as new connections. None of the six meter installation request files reviewed had a copy of the receipt reflecting payment for county connection charges. Allegations from personnel of the City's Public Work stated that they do request and keep copies of county connection charge payment receipts currently. A more recent meter installation request outside our sample was provided to Internal Audit showing a copy of the receipt. Water meter installations randomly sampled by Internal Audit were created during the years 2009 and 2010 (2 in 2009 and 4 in 2010 respectively).

Additionally, Public Works personnel alleged that payment receipts were only being requested on installation orders to properties where there were no previous meters installed. However, according to the definitions provided in the ordinance, any user who applies to a volume customer (the City) for water service, sewer service or both; or an existing user who applies for increased water service, sewer service or both should be subjected to the fee; therefore requiring a copy of payment receipt from the County.

Recommendation(s)

The Public Works Department should seek written clarification from the Miami-Dade County regarding the applicability and enforcement of the water and sewer connection charges covered in Ordinance No. 89-95, should they consider it necessary. Once done, policies and

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procedures to that effect should be documented and provided to all related personnel for implementation and consistent use. Additional training could be considered.

In addition, a copy of the payment receipt from the County showing full payment of the connection charges, whenever applicable, should be kept on file as supporting documentation regarding the departments due diligence and enforcement of Ordinance No. 89-95.

Management's Response(s)

Public Works staff will receive additional training stressing the need to maintain a copy of receipts from the County for the payment of connection charges.

## EXIT CONFERENCE

An exit meeting was held to discuss the audit report and to solicit management responses noted above. Attendees were Fred Beckmann, Public Works Director; Jay Fink, Public Works Assistant Director; Michael Alvarez, Infrastructure Division Director; Richard Saltrick, Assistant City Engineer; Keith Wilder, Senior Management Analyst; Demar Woodson, Right of Way Manager; Georgina Echert, Finance Assistant Director; Allison Williams, Chief Accountant; Manuel Marquez, Revenue Manager; James Sutter, Internal Auditor and Fidel Miranda, Auditor. Management responses were received shortly thereafter. All were in agreement with the contents of this report.

Audit performed by Fidel Miranda, Auditor

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cc:     Jorge Gomez, Assistant City Manager  
          Fred Beckmann, Public Works Director  
          Patricia Walker, Chief Financial Officer  
          Jay Fink, Public Works Assistant Director