



# Memorandum



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To: Honorable Mayor Carlos A. Gimenez  
Honorable Chairman Esteban L. Bovo, Jr.  
and Members, Board of County Commissioners, Miami-Dade County

From: Mary T. Cagle, Inspector General

Date: March 30, 2017

Subject: *OIG Final Report on the Audit of Miami-Dade Water and Sewer Department's CIP Payment Processing and Closed Projects*; Ref. IG16-01

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Attached please find the above-captioned final audit report issued by the Office of the Inspector General (OIG). The audit covered WASD's invoice payment process for both active and closed projects within its project control tracking system. More specifically, we reviewed Departmental processes, procedures, and controls surrounding the timely review, approval, and payment of contractor/consultant invoices, and project closure.

This report, as a draft, was provided to the Miami-Dade Water and Sewer Department (WASD) for its discretionary written response. The report contains two observations and two recommendations. The response received from WASD is attached as Appendix A. WASD, in its response, acknowledged that it would comply with the two recommendations and will be implementing corrective actions.

In that the implementation of our recommended actions is prospective, in accordance with Section 2-1076(d)(2) of the Code of Miami-Dade County, the OIG requests that WASD provide a status report in 90 days, on or before June 30, 2017.

Attachment

cc: Lester Sola, Director, Miami-Dade Water and Sewer Department  
Cathy Jackson, Director, Audit and Management Services Department  
Neil Singh, Interim Commission Auditor

# **Miami-Dade County Office of the Inspector General**



## **FINAL AUDIT REPORT**

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**Audit of Miami-Dade Water and Sewer Department's  
CIP Payment Processing and Closed Projects**

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**IG16-01  
March 30, 2017**

**MIAMI-DADE COUNTY OFFICE OF THE INSPECTOR GENERAL**  
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*Audit of Miami-Dade Water and Sewer Department's  
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**I. INTRODUCTION**

As part of the Office of the Inspector General's (OIG) ongoing oversight activities at the Miami-Dade Water and Sewer Department (WASD), the OIG initiated an audit of WASD's invoice payment process for projects within the project control tracking system. During the next 12-15 years, WASD will invest approximately \$13.5 billion in a Capital Improvement Plan (CIP) to enhance and upgrade infrastructure and increase service capacity. WASD is required to comply with a federal judicially enforced consent decree and the State of Florida's 20-Year Water Use Permit Conditions and mandated Ocean Outfall Requirements. Due to the breadth of these requirements and the dollar value associated, the OIG initiated an audit at WASD to analyze the Department's processes, procedures, and controls surrounding the timely review, approval, and payment of contractor/consultant invoices, and project closure.

**II. RESULTS SUMMARY**

Our review did not reveal any material weaknesses in the invoice payment or the project closure process that would rise to the level of an audit finding. While we encountered some issues, there were either reasonable explanations for them and/or WASD staff quickly resolved them during the course of our audit. We did observe, however, some areas that could benefit from enhanced processes, greater attention to detail and/or clarification of terms. As such, this report contains "Audit Observations" and corresponding recommendations, which we believe will be useful during the implementation of the new project control system, e-Builder.

**III. AUDITEE RESPONSE AND OIG REJOINDER**

This report, as a draft, was provided to WASD for its discretionary written response. WASD provided its written response to the OIG responding that it will be implementing each of the OIG's two recommendations. WASD's response is attached, in its entirety, as Appendix A to our final report. As the implementation of the two recommendations are prospective, the OIG requests that WASD provide us with a follow-up status report in 90 days, on or before June 30, 2017.

**IV. TERMS USED IN THIS REPORT**

CC	Construction Contract
CD	Consent Decree
CIP	Capital Improvement Plan
CSBE	Community Small Business Enterprise
e-Builder	Capital Program Management Software
ER	Expenditure Requisition
ERP	Enterprise Resource Planning / Accounting System (Oracle)

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GAO	Government Accountability Office
HLD	High Level Disinfection (Project)
OIG	Office of the Inspector General
OOL	Ocean Outflow Legislation
PCTS	Project Control Tracking System
Proliance	Construction Program Management Software
PSIP	Pump Station Improvement Program
R&R	Renewal and Replacement Program
SharePoint	E-file Document Repository
TA	Task Authorization (Consultant)
WASD	Miami-Dade Water and Sewer Department
WCTS	Wastewater Collection and Transmission System

**V. OIG JURISDICTIONAL AUTHORITY**

In accordance with Section 2-1076 of the Code of Miami-Dade County, the Inspector General has the authority to make investigations of County affairs; audit, inspect and review past, present and proposed County programs, accounts, records, contracts, and transactions; conduct reviews and audits of County departments, offices, agencies, and boards; and require reports from County officials and employees, including the Mayor, regarding any matter within the jurisdiction of the Inspector General. We performed this audit as a precursor to future OIG oversight of WASD.

**VI. BACKGROUND**

***CIP Background<sup>1</sup>***

WASD is the largest water and sewer utility in the southeastern United States, serving nearly 2.3 million residents and thousands of visitors on a daily basis. It is responsible for providing high quality water and wastewater services, and protecting public health and the environment. In order to continue to fulfill WASD's vision of continuous delivery of high quality drinking water and wastewater services in compliance with all regulatory requirements, WASD has embarked on a massive CIP that will enhance and upgrade the current infrastructure, and add new assets/infrastructure. The CIP will provide necessary upgrades to thousands of miles of pipes, pump stations, and water and wastewater treatment plants that provide residents and visitors with high quality drinking water and wastewater services. The CIP also includes a new water treatment facility, a new wastewater treatment facility, and a deep injection well.

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<sup>1</sup> See <http://www.miamidade.gov/water/capital-improvements-plan.asp>

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Accordingly, WASD will invest approximately \$13.5 billion over the next 12-15 years in capital projects related to water and wastewater system upgrades. This CIP, the largest in Miami-Dade County's history, will be an economic engine that creates over 16,000 new jobs over the next ten years, increases service capacity to support more businesses to open in the community, improve the reliability and sustainability of the water and sewer system, and generate \$24.9 billion in economic input. The plan identifies capital projects and equipment purchases, provides a planning schedule, and identifies options for financing the plan. WASD's CIP encompasses several programs that have been mandated by the Federal and State governments, including a Consent Decree, Ocean Outfall Legislation, Pump Station Improvements, and Renewal and Replacement projects, which is its own plan for additional improvements.

### ***Systems Background***

As part of our initial assessment, OIG auditors met with WASD personnel that have key responsibilities with respect to the CIP. They explained the risks that were involved in implementing the current plan, specifically due to both staff and system limitations. WASD Deputy Directors also articulated that the current project management software, Proliance, which had been used for the last WASD Capital Project (the High Level Disinfection Project), was being phased out over the next five years and would no longer be supported. As a result, WASD will need to invest in a newer product, in order to have tracking capabilities needed for its ongoing CIP. They also explained that, in its current configuration, even if it was not being phased out in five years, Proliance is not meeting the needs of WASD with respect to controls, roles, and responsibilities; user access rights; and electronic submissions of invoices.

Proliance is one part of the current system of record that WASD utilizes for its ongoing projects. WASD Contract Compliance and the Project Management personnel use Proliance to track the status and invoicing of each project. While most of the information associated with each project is entered into Proliance, this program does not communicate directly with ERP (WASD's accounting system) thus requiring additional manual entry. Consequently, WASD personnel must manually enter the same data twice into two different systems.

WASD has chosen e-Builder, a cloud-based construction program management system for capital projects, as a replacement to Proliance, and is currently in the process of procuring the system. WASD Deputy Directors have explained that only open projects will be manually entered, or "moved" to the new system, and that historical information will stay within Proliance. Accordingly, there is a need to ensure that correct and complete financial information be available for the implementation of the new e-Builder system.

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**VII. OBJECTIVES, SCOPE, AND METHODOLOGY**

OIG Auditors reviewed a sample of invoices and closed projects from 2012 to 2016, based on capital projects in Proliance, in order to determine whether current policies and procedures are effective. We also assessed the effectiveness and appropriateness of these procedures in light of the increase in expenditures and payment processing activities to take place in the near future and to identify areas of improvement.

Our audit scope encompassed the project population of all open consultant and construction invoices, including emergency and repair projects, and completed and/or closed projects from October 1, 2012 through March 25, 2016. Our sample sizes were determined using sampling guidance from the Government Accountability Office (GAO).

The audit testing steps utilized for our examination of open invoices and for completed or closed projects are listed below.

***Open Project Invoices***

We tested a representative sample of 247 consultant and construction invoices, out of 2,938 from Proliance, and compared the following invoice information against the information obtained from Proliance:

- PCTS Number – the unique identifier for the Project Control Tracking System
- Project and Sub-project Number
- Expenditure Requisition Number
- Purchase Order Number
- Invoice Date
- Invoice Received Date
- Date of Final Approval
- Vendor Type – Community Small Business Enterprise, Subcontractor, etc.
- Vendor
- Total Invoice Amount
- Base Contract Amount, or the original approved contract amount, which is different from an updated or approved contract amount when a contract may have undergone changes

We examined invoice data against the financial system records (ERP) in order to determine whether the reports and original population were correct and reflected actual invoice and contract amounts. Using this information, we calculated the total days from invoice date to payment date to determine compliance with the County's prompt payment requirements.

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Using the information obtained from Proliance, OIG auditors tested invoice payments to determine if the correct IG contract fee amount (1/4 of 1%) was properly deducted from each progress payment. In addition, we determined that appropriate supporting documentation was attached to each invoice and conformed to the controls for progress payments, and that proper approvals and authorizations based on the appropriate threshold were correct.

***Closed/Completed Projects***

We conducted testing on 11 completed and or closed projects, out of 107 from Proliance. These 11 completed or closed projects entailed 42 construction contracts and task authorizations, and 285 invoices. With respect to closed and/or completed projects, OIG auditors performed the following:

- Obtained copies of Construction Contracts (CC) or Task Authorizations (TA) of the selected programs and tested the invoices against what was initially authorized in the contract and/or authorized by contract modifications or change orders.
- Determined if contract modifications or change orders had been properly approved.
- Reviewed the selected projects for change orders or change authorizations (money spent out of contingency, but not a change above the contract amount) and determined if they appeared to be appropriate and properly approved prior to the work beginning.
- Reviewed the closed projects from Proliance against the ERP system to determine if the projects were closed to new journal entry postings.

We conducted our audit in accordance with Generally Accepted Government Auditing Standards (GAGAS).

**VIII. OIG AUDIT OBSERVATIONS AND RECOMMENDATIONS**

OIG Auditors performed the above-listed procedures and, while information appeared accurate, we noted areas for improvement in the overall process to increase efficiencies and improve data recordkeeping that could be beneficial when migrating the data to the new e-Builder system. Our observations and recommendations are presented below.



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**Observation No. 1 – Emergency Project Tracking**

OIG Auditors noted that there was no simple way to use Proliance to identify emergency projects or to be able to query emergency projects together in one Proliance-generated report. Emergency projects are non-scheduled projects demanding immediate attention. These projects may accelerate the previously scheduled replacement of maintenance or other scheduled projects, which may include portions of existing or planned CIP projects. Emergency projects may be more costly due to shortened timeframes and being critical in nature. We observed that if the emergency project was not part of the pre-existing CIP, it might not be included in Proliance.

Additionally, WASD's Finance Division creates its own separate cost-driven report that shows the actual costs of the emergency projects, but these are not reconciled to the schedules prepared by the Project Managers in Proliance. The Finance Division is able to query the emergency projects directly from the ERP accounting system, but this system does not communicate with Proliance. Moreover, Project Managers do not have timely access to ERP information. In addition, since this cost-driven report is performed for the division's own financial analysis, it is not communicated to the Project Managers, as a check against their Proliance records. Thus, the individual "silos" do not communicate, and Project Managers may not know how much has been spent to date on their projects, which may or may not include emergency projects.

**Recommendation No. 1**

As other CIP projects have a unique identifier in Proliance, such as OOL (Ocean Outfall Legislation), CD (Consent Decree), HLD (High Level Disinfection), PSIP (Pump Station Improvement Program), etc., WASD should consider giving emergency projects a type of unique identifier within the Proliance system, and prospectively the e-Builder System. Being able to track and analyze historical emergency projects and their applicable costs would allow WASD to analyze future emergency projects and to forecast budgets more effectively. While we note that the Finance Division monitors the costs associated with the emergency projects, we believe it would be more efficient and allow for more effective communication between WASD's sub-departments, if the emergency projects active in Proliance could be reconciled directly to ERP. It has been noted that the e-Builder system should allow for better communication with ERP. This functionality will allow for real-time reconciliations between the Controller's Division and the Project Managers. This benefit, however, will only be available for emergency projects, if they are notated as such within the e-Builder system. In addition, this should facilitate preparing reports to senior management on emergency project activity, scheduling, and funding that are more accurate, complete, and up-to-date.

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**Observation No. 2 – Project Closeout within the Project Tracking System**

When a Task Authorization (TA) is completed and all invoices have been paid, the status is recorded as “Closed” in Proliance. When a Construction Contract (CC) is completed and all invoices have been paid, the status is recorded as “Complete” in Proliance. As observed by the OIG, there is consensus that some uniformity of language is needed between WASD divisions on how a project or contract status should be labeled. Typically, once a CC is done, the item is in service and after any other street or landscaping repair is done, the project is “complete”. Once a project is complete, WASD and the contractor will complete forms stating that the project is complete and there are no further outstanding items or invoices, the project manager will fill out the appropriate form to have the project status moved to “closed”. A “closed” CC also means that any retainage is released and no more financial liability exists for WASD. In contrast, TAs can move straight to “closed” status after services have been rendered and accepted by WASD, as retainage is not held on TA payments. We tested 42 TAs and CCs, and noted project status inconsistencies among divisions. Some divisions within WASD use the term completed and closed interchangeably, which leads to confusion when a project is done. The following status inconsistencies were noted in Proliance:

- CC RESOR-1094-10REV00, as well as TAs 08ETCI006010REV00, 08ETCI006013REV00, and 10PBAI001004REV00 are listed as “Approved” in Proliance. Final payments had been made on these CC/TAs and, therefore, should have a status of “Completed” for the CC and “Closed” for the TAs.
- TA08ETCI006007REV02 is listed as “Draft” and should be listed as “Cancelled,” as there are no associated invoices and the estimated completion date was December 2012.

While the noted discrepancies are not significant on their own, similar such discrepancies, if frequent, will result in more impactful, incorrect project status reporting on a larger scale. This condition may lead to erroneous decision-making with accompanying adverse consequences. A bad result, even if only negligible impact to one project, could be much worse if impacting multiple projects. Accurate reporting of all aspects of the projects will help prevent undue confusion when project status updates are presented.

**Recommendation No. 2**

Management should adopt standard project status terms that will be used by all divisions in the new e-Builder system, in order to have consistency amongst various project types. In addition, any projects that will be migrated over to e-Builder should be reviewed to help ensure that the projects’ statuses are accurate and consistent.

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**IX. CONCLUSION**

Overall, the processes and documentation reviewed surrounding invoice payments and project tracking/closure appear to be operating as intended with appropriate controls and oversight in place to help ensure that the operations are in compliance with WASD policies and procedures. The prompt-payment invoices were 98% paid within the required timeframe. All invoices reviewed had adequate documentation and approvals prior to WASD remitting payment. Change orders and contract modifications were properly documented and approved prior to any work beginning, and the completed/closed projects reviewed had the appropriate approvals. No projects reviewed went over the established contractual amounts without prior approval from WASD.

The earlier-noted recommendations, while minor, only serve to enhance accountability and provide greater transparency in the administration of capital improvement projects. This is of particular importance as WASD moves forward with its \$13.5 billion CIP.

These improvements will be useful in the future when the new project control software, i.e., e-Builder, is installed and populated. In addition, with the expected increase in consultant and construction activity over the next 12-15 years, implementing these recommendations will help WASD maintain a database/sub-ledger that is easier to extract information from that management can utilize to make informed decisions on project status, planning, and budgets.

WASD provided its written response to the OIG responding that it will be implementing each of the OIG's two recommendations. As the implementation of the two recommendations are prospective, the OIG requests that WASD provide us with a follow-up status report in 90 days, on or before June 30, 2017.

# **Miami-Dade County Office of the Inspector General**



## **FINAL AUDIT REPORT**

### **Appendix A**

#### **Water and Sewer Department's Response**

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**Audit of Miami-Dade Water and Sewer Department's  
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**IG16-01**

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# Memorandum



**Date:** March 17, 2017  
**To:** Mary T. Cagle, Inspector General  
Office of the Inspector General  
**From:** Lester Sola, Director  
Miami-Dade Water and Sewer Department  
**Subject:** Response to the CIP Payment Processing and Closed Projects Review

Miami-Dade Water and Sewer Department (WASD) would like to thank the Office of the Inspector General (OIG) for performing a timely audit of WASD's Capital Improvement Program (CIP) Payment Processing and Closed Project Review. Given the magnitude of the CIP, it is important that WASD follow the County's policies and procedures and ensure that we have strong internal controls in place to safeguard County assets. We would also like to thank the OIG for giving WASD the opportunity to make corrections and the recognition of those corrections that were made immediately upon observation.

As stated in the Audit Report, there were no material weaknesses revealed that rose to the level of an audit finding. WASD concurs and will comply with the two recommendations that are made in the audit report. The first recommendation that will be implemented is that WASD should consider giving emergency projects a type of unique identifier within the Proliance system and prospectively the new e-Builder System. The second recommendation is that Management and staff should adopt standard project status terms that will be used by all divisions in the new e-Builder system. Separately, although there was no recommendation associated with the OIG's observation that "the prompt-payment invoices were 98% paid within the required timeframe", WASD is committed to working toward achieving 100%.

Thank you for your observations and recommendations. I appreciate your willingness to work with the Department to help improve our operations.

c: Hardeep Anand, Deputy Director, Miami-Dade Water and Sewer  
Frances G. Morris, Chief Financial Officer, Miami-Dade Water and Sewer  
David Ritchey, CPA, Assistant Director, Miami-Dade Water and Sewer  
Arlyn Rull, Assistant Director, Miami-Dade Water and Sewer

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