REPORT NO. 2023-06

TO: Kelli Hammer Levy, Director
         Public Works Department

FROM: Melissa Dondero, Inspector General/Chief Audit Executive *mD*
         Division of Inspector General

DIST: Ken Burke, CPA, Clerk of the Circuit Court, and Comptroller
         Jeanette Phillips, Chief Deputy Director, Finance Division
         Paul Dean, Director, Public Works Department
         Dan Mirabile, Section Manager, Stormwater and Vegetation Division
         The Honorable Chairman and Members of the Board of County Commissioners
         Barry Burton, County Administrator
         Jill Silverboard, Deputy County Administrator/Chief of Staff

SUBJECT: Inspector General's Follow-Up Audit of Pinellas County Capital Improvement
         Program and Infrastructure - Stormwater & Vegetation Division

DATE: April 12, 2023

The Division of Inspector General has completed a Follow-Up Audit of the Pinellas County Capital Improvement Program and Infrastructure for the Stormwater & Vegetation Division. The objective of our review was to determine the implementation status of our previous recommendations.

Of the 12 recommendations in the original audit report, we determined that 5 have been implemented, 2 have been partially implemented, and management applied an acceptable alternative to 5. The status of each recommendation is presented in this follow-up report.

We appreciate the cooperation shown by the staff of the Public Works Department during the course of this review.

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I. *Scope and Methodology*

We conducted a follow-up audit of the Pinellas County Capital Improvement Program and Infrastructure for the Stormwater & Vegetation Division. The purpose of our follow-up review was to determine the status of previous recommendations for improvement.

The purpose of the original audit was to:

1. Determine if Pinellas County's (County) management of the Stormwater and Vegetation Division's (Division) infrastructure was adequate to ensure current and future delivery of services
2. Determine if the process for maintaining, repairing, and replacing the Division's infrastructure was efficient and effective
3. Determine if management's assessment of funding sources would provide long-term sustainability for the maintenance, repairs, and replacement of the Division's infrastructure
4. Determine if the County's Capital Improvement Program (CIP) properly identified and prioritized the replacement needs of the Division's infrastructure

To determine the current status of our previous recommendations, we surveyed and/or interviewed management to determine the actual actions taken to implement recommendations for improvement. We performed limited testing to verify the implementation of the recommendations for improvement.

Our follow-up audit was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing* and the *Principles and Standards for Offices of Inspector General,* and, accordingly, included such tests of records and other auditing procedures, as we considered necessary in the circumstances. Our follow-up testing was performed during the months of November 2022 through March 2023. The original audit period was October 1, 2013, through December 31, 2020. However, transactions and processes reviewed were not limited by the audit period and scope.

II. *Original Report Reference*

To view the original report (Report No.: 2021-08), published in the report section of our website, please use the following link:

[Report 2021-08 Audit of Pinellas County Capital Improvement Program and Infrastructure - Stormwater & Vegetation Division](#)

III. *Implementation Status Table*

FINDING	PREVIOUS RECOMMENDATION	STATUS
1	*There Is No Dedicated Comprehensive Assessment Of Long-term Funding Requirements For Stormwater Infrastructure.*	
A	Delegate dedicated staff to perform a comprehensive analysis of long-term funding requirements on an ongoing basis.	**Implemented** The Division hired an Enterprise Asset Management (EAM) employee to plan and coordinate the evaluation and assessment of the reliability and maintainability of the Division's assets. The County also contracted a professional consultant with engineering, water, and project management expertise to update the 2013 Surface Water Assessment Governance and Rate Study. The contractor will be responsible for modeling the annual revenue needs and the cash flow projections for the County's surface water system to develop a sustainable long-term plan for the surface water program over a 10-year forecast period. The consultant has scheduled the completion of the financial report for August 2023.
B	Utilize the following resources for the comprehensive analysis of long-term funding requirements: • Asset Management Program (AMP) • Strategic Plan • Watershed Plans • Cityworks reports to provide an asset condition and age profile	**Implemented** The Florida Legislature requires the Division to develop a 20-year needs analysis every 5 years. The needs analysis compares the stormwater management program's plans to its projected funding. The Division completed the needs analysis using its documented plans and submitted the report to the County for submission to the Florida Office of Economic and Demographic Research in 2022. Also, in 2022, the Division revised its Comprehensive Stormwater Asset Life Cycle Model to develop better information about future needs. The Division integrated data and guidance from the Florida Department of Transportation, Pinellas County Property Appraiser, and the United States Department of Agriculture with its current AMP to improve the calculations of assets' estimated service life, remaining useful life, and percent remaining useful life. The improved Comprehensive Stormwater Asset Life Cycle Model now allows the Division to proactively determine assets' end-of-life timeframes and the estimated replacement cost.

FINDING	PREVIOUS RECOMMENDATION	STATUS
2	*Several Stormwater Assets Are Missing Attribute Information.*	
A	Prioritize populating missing asset attribute information in the Geographic Information System (GIS)/Cityworks applications.	**Implemented** Management collaborated with the County's Resilience and Asset Management (RAM), formerly the Office of Asset Management, and Enterprise GIS group to create a four-tier system of most important to least important asset attributes in the GIS database. Following the creation of the four-tier system, management implemented a process for its staff to prioritize populating the missing information of attributes in the top two tiers. Management and RAM collaborated to develop and update monthly a dashboard on the RAM SharePoint site. The EAM: Asset Class Inventory dashboard displays the percent attribute completion for top-tier attributes and is available internally to all management and staff for review. Management also creates targeted applications for staff to identify missing information in top-tier attributes. Null values in attribute fields denote the fields are less important to understanding and maintaining the asset, the fields do not apply to the asset, or the assets are old and the attribute information is unobtainable. Management also uses alternative means, such as the Pinellas County Property Appraiser's GIS data, to locate data to complete missing asset information.
B	Review global asset inventory reports on an established interval basis and update asset attributes as necessary.	**Implemented** Management configured Cityworks to push data from inspection forms into the associated GIS fields automatically. Also, management configured GIS to generate new attribute data as staff maps new assets in the field automatically. Combined with the four-tier system and the use of targeted applications implemented by management, the Division is updating asset attributes regularly. Management and RAM collaborated to develop and update monthly a dashboard on the RAM SharePoint site. The EAM: Asset Class Inventory dashboard displays the percent attribute completion for top-tier attributes and is available internally to all management and staff for review. RAM uses the data from the completed global asset inventory reports to populate the dashboard.

FINDING	PREVIOUS RECOMMENDATION	STATUS
C	Utilize the data edit functions in Cityworks and GIS to ensure all required attributes are input during inspections, maintenance, and asset acquisition.	**Implemented** Management uses the Cityworks system to obligate its users to populate the required asset attribute fields before closing a work order (WO). The Cityworks system displays an error message and highlights unpopulated required asset attribute fields when users attempt to close WOs for inspection and maintenance activities. Management enters new assets into Cityworks, opens new inspection WOs weekly, and assigns staff members to complete the inspections for the new assets, which ensures new assets follow the same process.
D	Ensure policies and procedures reflect the Cityworks attributes that are required for the following: • New assets • Completion of inspection and maintenance activities	**Partially Implemented** Management has plans for Fiscal Year 2023 to update the procedures in the 2018 Activity Guidelines to align with the functions of Cityworks. Although management created the procedures in the guidelines document based on the functions of the AgileAssets software, the procedures are still useful for Stormwater staff despite needing to be updated and are being used in conjunction with the 2022 Work Identification Guidelines. Public Works was reaccredited in 2022 for another four years by the American Public Works Association (APWA), partially for having policies and procedures in line with the association's requirements. We continue to recommend management implement the recommendation fully, as the risks of inexperienced staff incorrectly populating or not populating the attributes in Cityworks will continue to exist until management finishes updating its procedures.
3	*Maintenance Types Have Not Been Tracked And Analyzed.*	
A	Revise written policies and procedures to ensure maintenance types are properly documented.	**Acceptable Alternative** Although the Division did not revise the recommended procedures in the 2018 Activity Guidelines, the procedures are still valid and used by staff despite the new asset management software Cityworks. Plans for Fiscal Year 2023 are in effect to create a training resource based on the procedures but for use with the Cityworks software. Management utilizes the Cityworks system to record and track WO maintenance

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		types. The Cityworks system assigns maintenance types to WOs by default. Management has implemented a quality assurance measure to review the maintenance types and correct them when necessary. The Cityworks system allows the Public Works Operations group to track maintenance types and keep the record of each WO accurate.
B	Develop and implement a process to utilize Cityworks statistical reporting for maintenance performance data. The process should include reviewing the data on a pre-determined interval cycle.	**Acceptable Alternative** The Division implemented an alternative to our recommendation because it evaluated our recommendation and determined the type of reporting recommended did not provide optimal insight into whether the Division was processing less reactive than preventive maintenance types. In Cityworks, management replaced the maintenance type "reactive" with "event." The Division began evaluating the efficiency of its maintenance efforts to lessen emergency flooding occurrences by tracking events such as emergency response calls. The Division also began proactively inspecting assets in high-risk areas to deter potential flooding occurrences. At the time of our follow-up testing, management reported that 80% of the Division's maintenance activity was preventive. Also, management reported an approximate 19% decrease in emergency calls when comparing May through October 2021 to the same timeframe in 2022. Preventive maintenance activities are a valuable community relations tool and reduce the likelihood of asset failures.
C	Complete report development for tracking preventive, reactive, corrective, and predictive maintenance types.	**Acceptable Alternative** Management determined that tracking the maintenance types would not provide valuable information since the department categorized WOs as preventive 80% of the time. Instead, management began using maintenance performance data produced and stored in Cityworks to evaluate the occurrences of emergency response situations, the results of proactive maintenance efforts to assets in high-risk areas, and the trend of preventive versus event maintenance activities across the County. Based on a six-month comparison of May through October 2021 and 2022, management reported an approximately 19% decrease in emergency calls.

FINDING	PREVIOUS RECOMMENDATION	STATUS
4	***The Transparency Of Watershed Management Plans Needs Improvement.***	
	Provide an annual summary report for each watershed on Environmental Management's and the Division's websites. The summary report should entail the following information: • Status of Watershed Management Plans (WMPs) • Progress on implementation of WMP recommendations • Capital improvement projects initiated into the CIP • Status and changes of capital improvement projects • Funding synopsis, including budget and actual expenditures incurred for WMPs and capital improvement projects	**Partially Implemented** Management worked with BTS to develop a new webpage on the Public Works website to address the issue of watershed management transparency. The new webpage covers the topics of watershed information and watershed management and includes links to webpages that provide information on each watershed. Management is finalizing each watershed's webpage and strategizing with BTS to determine how to include the WMPs and other large documents on the webpages. In the meantime, management provided the public with a direct email contact for requesting additional information on the watershed information webpage. Management also worked with BTS to create a CIP Viewer Map, which leverages GIS and provides an overview of the capital projects that are upcoming and in progress. Internally, management uses a tracking mechanism to link WMPs to CIPs. Management plans to link future projects resulting from the WMPs to the projects in the CIP Viewer Map, as applicable. We encourage management to continue making improvements to the watershed webpages to include the WMPs, links to the CIPs, and associated progress and expenditures. Without management finalizing the individual watershed webpages to include all relevant data, stakeholders may experience difficulties tracking WMPs and associated CIP information.
5	***The Public Works Department Strategic Plan Was Outdated.***	
A	Post the 2019 Strategic Plan on the Public Works website.	**Acceptable Alternative** Management finalized and posted the 2022 Strategic Plan, dated June 2022, to the Public Works website. The 2022 Strategic Plan superseded the 2019 Strategic Plan, which was not posted on the website due to ADA compliance considerations.

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B	Update the Strategic Plans for 2020 and 2021. The updated versions should be posted to the Public Works website.	**Acceptable Alternative** Management changed its policy to align with its APWA accreditation schedule and began updating the department's strategic plan quadrennially as opposed to annually. Consequently, no Strategic Plans were created for 2020 and 2021. Management finalized and posted the 2022 Strategic Plan, dated June 2022, to the Public Works website.

MD/SP