Stantec

City of Cocoa, Florida

Stormwater Rate Study – Final Report

August 26, 2019

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John Titkanich
City Manager
65 Stone St.
Cocoa, FL 32922

Re: Stormwater Assessment Study – Final Report

Dear Mr. Titkanich,

Stantec Consulting Services Inc. (Stantec) is pleased to present this final report of the Stormwater Assessment Study (Study) that Stantec performed for the City of Cocoa, Florida (City).

Stantec appreciate the fine assistance provided by you and all of the members of City staff and who actively participated in and contributed to this Study. Please feel free to distribute this report to the appropriate members of City staff for their review and comments in addition to your own.

If you have any questions or would like to discuss, please do not hesitate to call me at (904) 923-1466 or email me at Michael.Burton@stantec.com. Stantec appreciate the opportunity to be of service to the City and look forward to the possibility of doing so again in the near future.

Sincerely,

Michael Burton
Vice President – Financial Services
Stantec Consulting Services, Inc.
4651 Salisbury Rd., Suite 350
Jacksonville, FL 32256
Office - (904) 247-0787
Direct – (904) 923-1466
Michael.Burton@stantec.com

Enclosure

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1. INTRODUCTION

Stantec Consulting Services Inc. (Stantec) has conducted a Stormwater Assessment Study (Study) for the City of Cocoa's Stormwater Enterprise Fund (Fund). This report presents the objectives, approach, methodologies, source data, and assumptions, as well as the findings and recommendations of the Study.

1.1 BACKGROUND

The City of Cocoa (City) manages an extensive Stormwater Utility System. The Stormwater Management Division of the City is responsible for maintaining the City's drainage ditches, swales, piping, inlets, manholes, and retention and detention ponds. The Stormwater System serves to protect individual and personal property, while reducing the impacts of urban runoff to the natural environment and specifically the ecologically significant Indian River Lagoon.

While the City evaluates the level of its stormwater user fees annually as part of its budget process, this study goes beyond normal budgeting and includes a ten-year revenue sufficiency analysis and a stormwater revenue recovery structure evaluation for the City's Stormwater Enterprise Fund. The Stormwater Utility currently charges monthly stormwater user fees to properties through their water and sewer utility bill. Residential parcels are assessed on a per dwelling unit basis, while commercial and vacant parcels are assessed based upon measured impervious and pervious area. The Stormwater Fee and the Stormwater Utility were established in the early 1990's and have been unaltered in structure since inception.

1.2 SCOPE OF SERVICES

The purpose of this Study was to develop a sustainable financial plan and modern assessment structure for the City's Stormwater Utility that satisfies the projected cost of providing the desired level of service, ensures an equitable allocation of costs to different parcel types, and evaluates and potentially modifies the current stormwater fee structure.

The scope of services for the Study are outlined herein:

- Revenue Requirements – Develop a ten-year financial plan for the Stormwater Utility to ensure that the assessments developed will provide sufficient revenues to cover all of the Stormwater Utility's operations, maintenance, debt service, and capital costs, while maintaining sufficient levels of reserve funds. As part of this Analysis, Stantec worked directly with the City and the City's consulting Engineers (Mead and Hunt) to develop a sustainable 10-year capital improvement plan.
- Billing Method – Determine the appropriate billing method for Stormwater revenue collection: continuing to bill on the water and sewer utility bill or converting to collecting the stormwater fee as a non-ad valorem assessment on the property tax bill.

- Measurement of Impervious Area – Conduct a geospatial measurement of impervious area in the Cocoa Stormwater Service area for each parcel with service. As part of this analysis, Stantec created a stormwater geodatabase that includes polygons which digitally represent the impervious area measured on each parcel.

- Stormwater Assessment Structure Design – Develop specific assessments by property class that advance the inherent equity of the City's stormwater assessments, enhance transparency, and increase administrative efficiency. Additionally, a Master Account File (MAF) with the stormwater assessment for each account to be billed was created.

2. REVENUE REQUIREMENTS

2.1 DESCRIPTION

This section presents the development of annual system revenue requirements and the corresponding plan of annual revenue adjustments for the Stormwater Utility as identified during the Revenue Sufficiency Analysis (RSA) component of the Study. The following sub-sections of the report present a description of the source data, assumptions, and resulting multi-year financial plan, while Appendix A includes detailed supporting schedules for the financial management plan identified herein for the Stormwater Utility.

During the RSA, Stantec reviewed several alternative multi-year financial management plans and corresponding stormwater annual revenue adjustment plans through interactive work sessions with City staff. During these work sessions, we examined the impact of various inputs and assumptions upon key financial indicators summarizing the results of the forecasting model under assumed conditions. In this way, we incorporated local information and management input as we developed the recommended financial management plan for the Stormwater Utility. The result is a financial plan that considers the City's current and best assumptions and data to satisfy the Stormwater Utility's revenue requirements over a multi-year projection period while meeting key financial performance objectives and minimizing annual assessment adjustments to the greatest extent possible.

In order to initialize the RSA, we obtained the City's historical and budgeted financial information regarding the operation of its Stormwater Utility, as well as information pertaining to the enterprise fund's fund balance and future out-year cost requirements. We also worked with the City, City staff engineers, and the engineering team of Mead and Hunt to incorporate the Stormwater Utility's multi-year capital improvement program (CIP). We discussed with City staff other assumptions and policies that would affect the performance of the Stormwater Utility, such as planned developments/property growth, capital funding sources, debt service coverage, reserve fund levels, earnings on invested funds, escalation rates for operating costs, and other considerations.

This information was entered into the financial module of our proprietary Financial Analysis and Management System (FAMS-XL) interactive modeling system. This module of FAMS-XL produced a ten-year projection of the sufficiency of the revenue provided by stormwater assessments to meet current and projected financial requirements. Based upon these projections, Stantec then determined the level of revenue adjustments necessary in each year of the projection period to satisfy the Stormwater Utility's annual financial requirements.

The revenue sufficiency and financial planning module of FAMS-XL utilizes all projected available funds in each year of the projection period (after payment of operations and maintenance expenses, debt service and renewal and replacement) to pay for capital projects. The model incorporates the rules of cash application as defined and applied by City Staff, and it produces a detailed summary of the funding sources to be used for each project in the CIP. To the extent that current revenues and unrestricted reserves are not adequate to fund all capital projects in any year of the projection period, the model identifies a borrowing

requirement to fund those projects or portions thereof that are determined to be eligible for borrowing. In this way, the FAMS-XL model is used to develop a borrowing program that includes the required borrowing amount by year and the resultant annual debt service requirements for each year in the projection period.

2.2 SOURCE DATA

The following sections review the various source data and assumptions supporting the Stormwater System revenue requirements identified during the course of the Study.

2.2.1 Beginning Fund Balance

City Staff provided audited FY 2018 financial information used to establish the beginning FY 2019 balances for the revenue fund (operating fund) of the Stormwater Utility. The detailed end of FY 2018 fund balances (as of September 30, 2018) that serve as the FY 2019 beginning fund balances are presented on Schedule 2 of Appendix A.

2.2.2 Revenues

The revenue projections utilized in the Study reflect an evaluation of multiple years of historical results, FY 2018 audited actual results, and the FY 2019 amended budget. Budgeted revenues for the Stormwater Utility consist of stormwater user fee revenues and other earnings and interest income. FY 2019 projected stormwater user fee revenues are based upon the City's current fee structure, the projected number of equivalent units for both residential and non-residential properties, and the assumed number of acres of undisturbed property. Revenue projections for the remainder of the forecast represent FY 2019 projected revenues adjusted for assumed developer property growth and annual fee increases. Interest income is calculated annually based upon average fund balances and assumed interest rates. A summary of projected cash inflows is presented on Schedule 3 of Appendix A.

2.2.3 Operating Expenditures

The Stormwater Utility's operating expenditures include all operating and maintenance (O&M) expenses, calculated debt service requirements, and minor capital outlay requirements. The RSA based the operating expenditure projections on the individual expense categories and expense amounts contained in the FY 2018 audited actual results and the FY 2019 amended budget. The cost requirements from the FY 2019 proposed budget were adjusted annually thereafter based upon assumed cost escalation factors that were determined in consultation with City staff. In addition to the budgeted expenses, allowances were made for anticipated expenses such as pond maintenance, replacement or lining of corrugated pipes, and curb and gutter maintenance.

Projected operating expenditures and cash outflows (excluding the cash funding of capital) are presented on Schedule 4 of Appendix A.

2.2.4 Capital Improvement Program (CIP)

A 10-year CIP was developed during this Study through interactive work sessions with City staff and the City's consulting engineer (Mead and Hunt). The CIP plan used in the analysis was developed on July 30, 2019. The CIP identified in the Study is presented in project level detail from FY 2019 through FY 2029 and considers both the future needs of the Stormwater System as well as the funding capabilities of the Stormwater Utility. Beginning in FY 2021, budgeted capital improvement requirements are adjusted for anticipated inflation of 3.00% per year (based upon recent increases observed in the Engineering News Record Construction Cost Index) to account for the inflation in the future cost of construction. In total, the CIP in future year dollars from FY 2019 through FY 2029 is approximately $12.7 million. Of the $12.7 million in budgeted capital projects, approximately $10.2 million is to be funded with long-term debt over the course of FY 2020 through FY 2029, with debt issuances assumed in 3-year increments ($5.2 million in FY 2020, $1.7 million in FY 2023, $1.3 million in FY 2026, and $2.0 million in FY 2029). More information related to the debt-funding of capital projects is discussed in Sections 2.3.5 and 2.3.6 of this report. A detailed list of the specific projects and costs by year is included on Schedule 6 of Appendix A.

2.3 ASSUMPTIONS

2.3.1 Cost Escalation

Annual cost escalation factors for the various types of operating and maintenance expenses were developed based upon discussions with City staff, a review of historical trends, and our industry experience, and are applied in each year of the projection period beginning in FY 2020. The specific escalation factors assumed for the various categories of expenses can be found on Schedule 5 of Appendix A.

2.3.2 Interest Earnings

The Study reflects assumed interest earning rates on invested funds of 0.25% starting in FY 2019, projected to increase by 0.25% every year until interest earnings reach 2.00% in FY 2026. Projected interest earnings are presented on Schedule 3 of Appendix A.

2.3.3 Property and Impervious Area Forecast

A forecast of stormwater properties (equivalent units) within the City was developed based on historical trends and staff discussions. The forecast assumes conservative growth of 0.5% annually for residential and non-residential equivalent units and no growth in undisturbed property acres.

2.3.4 Minimum Reserve Policy

Reserve balances for utilities are funds set aside for a specific cash flow requirement, financial need, project, task, or unforeseen system requirements. These balances are maintained in order to meet short-term cash flow requirements and minimize the risk associated with meeting the financial obligations and continued operational and capital needs under adverse conditions. The level of reserves maintained by a

utility is an important component and consideration in developing a utility system multi-year financial management plan.

Many utilities, rating agencies, and the investment community place a significant emphasis on having sufficient reserves available for potentially adverse economic conditions. The rationale related to the maintenance of adequate reserves is twofold. First, it helps to ensure that a utility will have adequate funds available to meet its financial obligations during unusual periods (i.e. when revenues are unusually low and/or expenditures are unusually high). Second, it provides funds that can be used for emergency repairs or replacements to the system that can occur as a result of natural disasters or unanticipated system failures.

The financial management plans presented in this report assume that the City will maintain a minimum unrestricted cash reserve balance equal to 4 months of annual operating and maintenance expenses. This level of reserve is consistent with 1) our industry experience for similar systems, and 2) a healthy level of reserves for a municipal utility system per the evaluation criteria published by the municipal utility rating agencies (Fitch, Moody's, and Standard & Poor's).

2.3.5 Future Borrowing & Capital Funding

As the 10-year CIP for the Stormwater Utility was developed in this Study, sources of funding for individual projects were identified. Approximately $11.1 million in capital funding was determined to be provided through revenue bonds, with the remainder of projects to be paid for out of the Stormwater Utility's revenue fund.

The new long-term debt required during the projection period is assumed to be issued for a 30-year term, starting at an interest rate of 3.50% in FY 2019, and gradually increasing up to 5.00% by FY 2022. The City's actual future financing and funding decisions will reflect then-current market conditions and broader City-wide financing objectives, but the projections in this Study reflect realistic projections of expected overall conditions and are appropriate for planning purposes.

A complete schedule of assumed CIP funding can be found on Schedule 9 of Appendix A and projected future senior lien borrowing can be found on Schedule 11 of Appendix A.

2.3.6 Debt Service Coverage

The City's Stormwater Utility currently has no outstanding debt; however, a minimum senior-lien debt service coverage ratio of 1.25 (with a target of 1.50), was utilized in the current Study for projected future debt issuances. The debt service coverage ratio signifies that net income must be at least 1.25 times annual debt service.

The ratio of net income to annual debt service requirement (referred to as a debt service coverage ratio hereafter) described above was developed through discussions with City Staff and represents the minimum requirements of bondholders. As a policy decision, utilities frequently opt to measure revenue sufficiency

and set fees based upon a higher debt service coverage ratio in order to ensure compliance with the rate covenants in the event future projections of revenue and expenses do not occur as predicted (due to unanticipated capital requirements or substantial operating cost increases, natural disasters, etc.). The financial management plan presented herein results in projected total debt service coverage greater than 1.50 in each year of the forecast, which is indicative of the midrange level of municipal utility system performance per the current evaluation criteria published by the municipal utility rating agencies (Fitch, Moody's, and Standard & Poor's).

2.4 RESULTS

Based upon the source data and assumptions presented herein, the Study resulted in the following findings and recommendations relative to the financial sustainability of the City's Stormwater System:

- The City's current stormwater revenues are insufficient to meet projected operating & capital expenditures of the Stormwater Utility through the projected time period.
- In order to generate sufficient revenues to meet the financial requirements of the Stormwater Utility, Stantec recommends that the City adopt the stormwater assessments recommended in Section 3 of this report, which will generate 9% more revenue in FY 2020 than was generated in FY 2019. Additionally, we recommend that stormwater assessment revenues be increased by 9% each October 1st for the following two years (FY 2021 – FY 2022) and then establish an annual revenue adjustment indexing plan of 3%, beginning in FY 2023, consistent with historical levels of inflation. A 5-year revenue adjustment plan for the Stormwater Utility is shown below in Table 2-1.

Table 2-1 Stormwater Assessment Adjustments

Fiscal Year	FY 2020[1]	FY 2021	FY 2022	FY 2023	FY 2024
Effective Date	10/1/2019	10/1/2020	10/1/2021	10/1/2022	10/1/2023
Stormwater Revenue Adjustment Plan	9.00%	9.00%	9.00%	3.00%	3.00%

It is important to note that the projections of future conditions underlying this analysis are not intended to be predictions. Applicable to many utility systems, there are multiple factors beyond the City's control, such as i) weather, ii) regulatory changes, iii) national, regional, and local economic conditions, iv) the rate of growth in developed properties, v) operating and capital cost inflation, and vi) changes in the timing and composition of the Stormwater Utility's capital improvement program, that may have material impacts on the future financial condition of the City's utility operations. Further, the projections in this Study rely upon data and guidance provided by the City during the development of the Study, and while the information

[1] FY 2020 stormwater assessment revenue requirement will be recovered through the new fee structure as discussed in Section 3 of this report.

utilized in this Study is believed to be reliable, detailed independent reviews or auditing of the data were not conducted.

As a result, there will usually be differences between forecasted and actual results because events and circumstances frequently do not occur as expected, and those differences may be material. While Stantec has no responsibility to update this report for events and circumstances occurring after the date of this report, future management actions should be based upon and adjusted to reflect future results as they occur. These comments are provided to emphasize the importance of active management informed by the actual future results of Stormwater Utility operations by the City. While the planning effort supported by this Study will serve to guide and inform the City in balancing future revenue and spending decisions, it is only through observation of future results, and the update of this analysis, that the City will be able to determine the actions required to ensure its financial and operational objectives are met over time.

Appendix A includes detailed schedules presenting all components of the financial management plan developed for the Stormwater Utility.

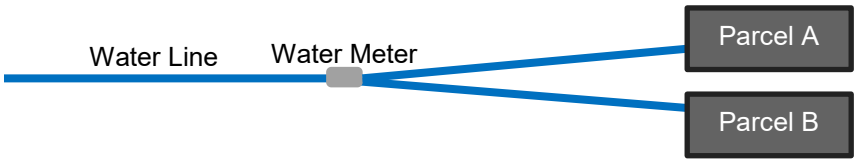
3. STORMWATER ASSESSMENT COLLECTION METHODOLOGY

Stormwater revenues are collected from the users and beneficiaries of a stormwater system through two standard methods; monthly utility bills or annual non-ad valorem property assessments. The City currently uses the utility billing method and has expressed concerns with regards to managing the required data base needed to administer this method. Stantec reviewed the two methods and has the following findings:

Utility Billing Method

This form of billing primarily relies on the existing utility billing infrastructure for water and sewer service in order to bill for stormwater service. For rural and/or communities with a simple flat fee for stormwater, this method can be sufficient. The level of the fee can be adjusted by City action in a relatively short timeframe. Two primary issues arise in the City of Cocoa that make this method less than optimal for the collection of stormwater fee revenue. First, the fee is only paid on active utility accounts and the City has a significant amount of rental, both commercial and residential, that go inactive when vacant, resulting in a revenue shortfall that must be accounted for in the level of the fee. Additionally, utilizing the utility billing method requires that utility billing accounts are mapped to the underlying parcels being served. While simple in the case of one utility account to one parcel, there are often cases in which one utility account services multiple parcels. This dynamic is shown simplistically in Figure 3.1 below in which one utility account and meter is serving two billable stormwater parcels. Without a significant amount of administrative resources, the relationship between utility accounts and parcels is often hard to maintain. As parcels are developed or old ones split, the connection between utility accounts and parcels is altered and must be updated to maintain a current database. For these reasons, it is not recommended that the City continue with the monthly utility billing method of stormwater fee collection.

Figure 3.1 – Current Utility Billing Configuration

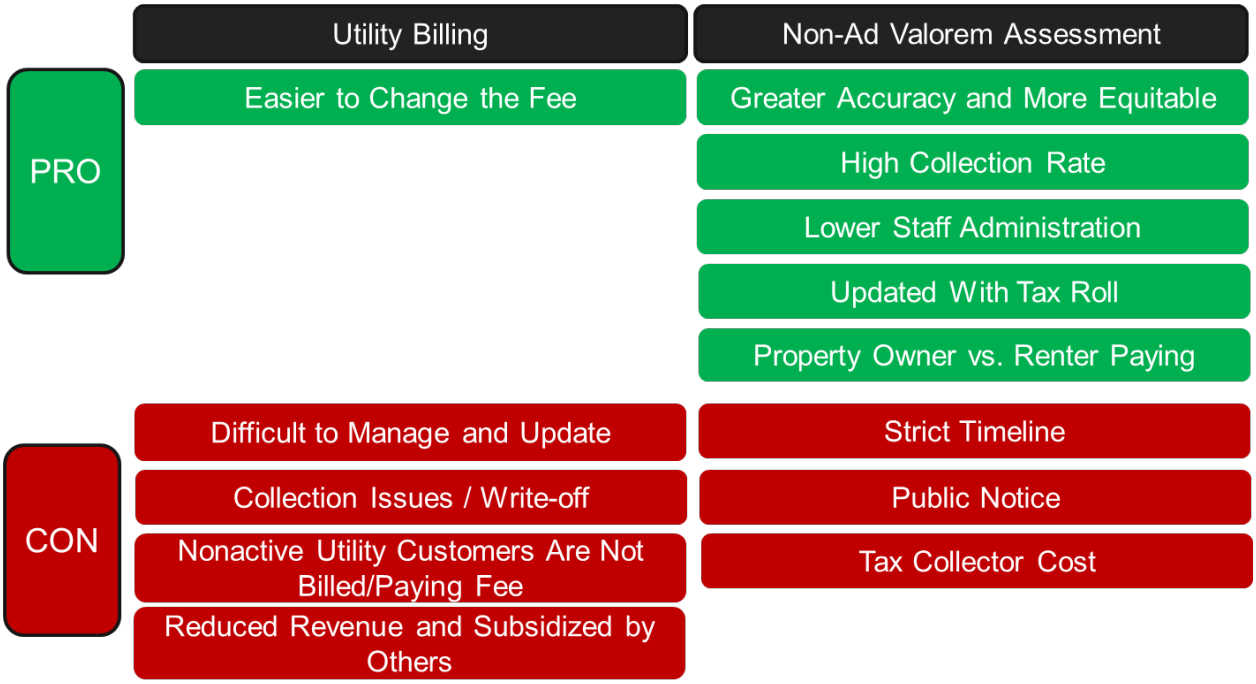


Non-Ad Valorem Assessment Method

Alternatively, the stormwater revenue requirements can be assessed to property owners directly through a non-ad valorem assessment on the annual property tax bill. In doing so, this method eliminates the need to create utility billing account matches and additionally results in high revenue remittance rates, solving the primary deficiencies that arise in the City of Cocoa when using the Utility billing method. For these reasons it is recommended that the City switch billing methods to the non-ad valorem process. The primary drawbacks to this method arise in the form of strict timelines for the submission of the assessment roll to

the tax collector and cost incurred in collection fees from the tax collector. The full list of the pros and cons developed in the study is included below in Figure 3.2

Figure 3.2 - Billing Collection Method Comparison



Based upon discussions with City Staff and interaction with City Council, the City Council has determined to implement a stormwater assessment and has directed that this study develop such an assessment program. As such, the development of stormwater assessment rates and the final assessment roll reflect this assumption. The assessment roll should be updated each year with the most current parcel listing for the service area.

3.1 STORMWATER METHODOLOGY PEER COMPARISON

As part of the analysis, a local benchmarking comparison was developed to compare the stormwater revenue collection methodology employed by other local communities. Table 3.1 provides a summary comparison between local communities that utilize a non-ad valorem assessment collection methodology and those that charge a fee for stormwater services on the utility bill. Through Stantec's state and national experience, a movement from utility billing towards an annual assessment has been observed and is expected to continue as communities realize the benefits of an annual assessment.

Table 3.1 – Stormwater Revenue Collection Methodology Comparison

Stormwater Utility	Non-ad Valorem Assessment	Utility Bill
Brevard County (District 1)	X	
Cape Canaveral		X
Cocoa (FY 2019)		X
Cocoa (FY 2020)	X	
Cocoa Beach		X
Daytona Beach		X
Edgewater		X
Flagler Beach		X
Holly Hill	X	
Indialantic	X	
Indian Harbour Beach	X	
Malabar	X	
Melbourne	X	
New Smyrna Beach	X	
Ormond Beach		X
Oviedo		X
Palm Bay	X	
Palm Coast		X
Port Orange	X	
Rockledge		X
Sanford		X
Satellite Beach	X	
South Daytona		X
Titusville	X	
West Melbourne	X	
Count	**13**	**12**

4. STORMWATER BILLING BASIS

4.1 FINDING OF SPECIAL BENEFIT OF THE CITY'S STORMWATER SERVICE

Non-ad valorem assessments in the State of Florida must meet a two-pronged test. The first prong of the test is that the service being assessed must provide a special benefit to the properties being assessed. The second prong of the test is that the assessments must be fairly and reasonably apportioned to the parcels being assessed and the benefits to the parcels must equal to or exceed the assessment.

4.1.1 Special Benefit – The First Requirement

Properties within the City receive a special benefit from the stormwater services provided through annual operation, maintenance, and repairs of the stormwater system.

Special Benefits include the following:

- Reduced urban runoff and pollutants to the natural environment.
- Reduced flooding of private property.
- Improved safety and welfare of the residents and visitors of the City, including improved emergency response capabilities as a result of stormwater flood mitigation.
- Enhanced use and enjoyment of property.
- Enhanced property and rental value, marketability, and integrity of the property.

Therefore, the first requirement that (the property burdened by the assessment must derive a special benefit from the service provided by the assessment) is met because each property will receive a special benefit from the stormwater service provided by the City.

4.1.2 Fair and Reasonable Apportionment – The Second Requirement

In considering the assessment methodology, the second requirement is that the costs must be fairly and reasonably apportioned among the properties that receive the special benefit so that no property is paying more than the benefit received. The stormwater assessment for a property is based on the estimated stormwater generated on the parcel as result of the specific characteristics of the property (i.e. impervious surface vs. pervious surface), and therefore, the second requirement is met because the assessment is fairly and reasonably apportioned to parcels receiving benefit from the stormwater system. Section 5 of this report summarizes the apportionment methodology used to create the assessment; whereas, Section 4 of the report describes the billing basis of the assessment program.

Stormwater management efforts are fundamentally concerned with the systematic management of stormwater runoff in the community, which are primarily driven through the quantity and quality of stormwater delivered to the municipal system. Properties within the City receive a special benefit from the stormwater services provided through annual operation, maintenance, and repairs of the stormwater

system. The City of Cocoa's stormwater system serves the property base of the community by receiving runoff from developed parcels during storm events and conveying the stormwater to receiving bodies. This critical function provides for the protection of private property during adverse storm events that can cause flooding and maintains clear and passable roads so that parcels are accessible. Additionally, much of the community's stormwater is ultimately deposited in the Indian River Lagoon, an ecologically sensitive water body. As such, environmental regulators have instituted total maximum daily load (TMDL) requirements to ensure that surface water bodies are protected. The City of Cocoa manages its stormwater to improve the quality of runoff entering surface waters.

Managing a stormwater system such as the one in place in the City of Coca requires monetary resources. The City currently collects revenue though a stormwater user fee that is levied in the form of a monthly utility bill for properties with water and sewer utility service or an annual bill for unserved parcels. The current fee is structured to bill utility accounts based on both the amount of impervious area present on the parcel and the amount of pervious area on the parcel. This is a hybrid fee structure between two distinct billing units. Stantec, as part of the fee study, reviewed both the alternatives for stormwater revenue collection and the basis of the revenue collection method considering modifications that would improve transparency, administrative efficiency, property owner understanding and fit the underlying characteristics of the community the best. The following sections detail the thought process and present the recommendations of the study as they relate to the measurement of stormwater service, stormwater revenue recovery structure, and collection method.

4.2 STORMWATER BILLING BASIS

The collection of dedicated stormwater revenues can and is accomplished through the use of different billing bases. The billing basis is essentially the methodology used to measure the stormwater contribution from each parcel and to fairly apportion the Stormwater Utility revenue requirement among benefitting parcels. The stormwater assessment billing basis methodology is driven by two key factors, which include availability of data and the equity associated with the basis. For example, while it would require limited information to bill each property owner in the City the same flat assessment, this approach would certainly not recognize the different stormwater contribution potential of different parcels to the City's system. There are a number of different approaches that have been used around the country to address stormwater cost apportionment and revenue recovery, including property value, metered water use, parcel gross area and zoning, building footprint, and impervious area. Since the conversion of natural land to developed land with impervious area results in increased stormwater runoff, most communities with stormwater utilities use impervious area, or some variation of impervious area, as the basis for the stormwater assessment or utility fee. Impervious area impedes the natural infiltration of stormwater into the ground and results in higher stormwater runoff that must be managed by the City's System.

Numerous engineering and hydrologic studies have demonstrated that impervious area is the single most important factor contributing to the quantity and quality of stormwater runoff from a property. For example,

a one-acre undeveloped parcel will generate approximately 1,600 gallons of stormwater during a one-inch rainfall event, whereas a one-acre parking lot will generate 26,000 gallons of stormwater during the same rainfall event. As a result, the use of impervious area has been demonstrated to be a highly defensible basis and has been validated in numerous legal challenges in Florida, and across the country. The use of impervious area is typically easily understood within the community. The use of impervious area requires information that delineates the impervious area on all parcels within the community, typically contained in a geographic information system (GIS) database.

The City's current Stormwater fee is based on a hybrid of impervious area and pervious area on a parcel. This is a relatively uncommon stormwater fee methodology for stormwater fees. This analysis reviewed the various industry standard bases for recovery of required stormwater revenues and provided a recommendation below that best fits the needs of the community by increasing transparency, administrative efficiency, property owner understanding, and simplicity.

Recommended Stormwater Assessment Cost Apportionment Basis

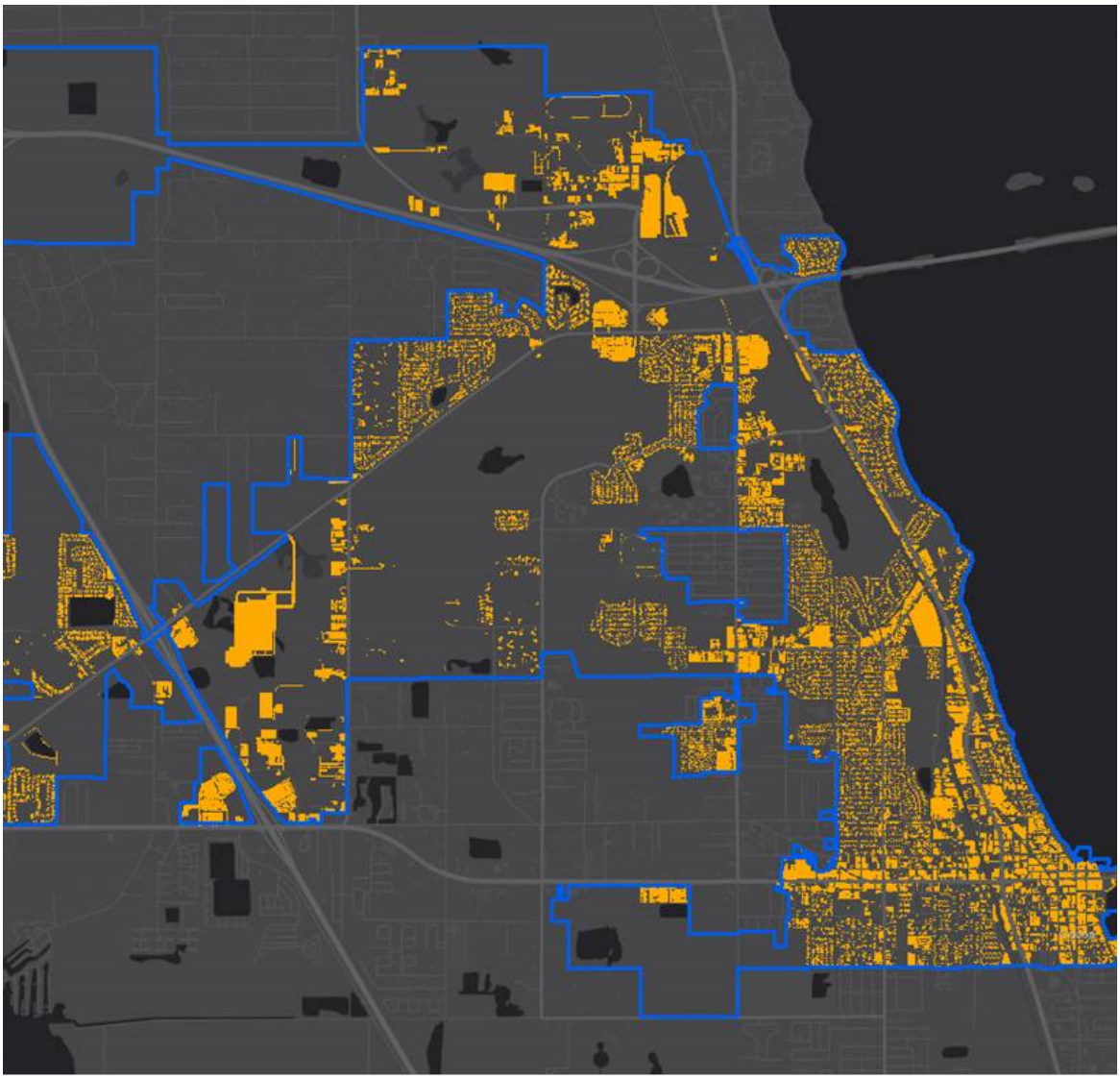
Based on our project team's experience and the key goals and objectives for the Stormwater Utility assessment structure in the City, Stantec recommends that the City use impervious area as the sole basis for apportioning costs to benefitting parcels for the stormwater assessment. This approach meets key goals and objectives and provides a simple, easy to understand approach that is defensible and provides an equitable and reasonable allocation of stormwater costs to benefitting parcels within the City.

4.3 MEASUREMENT OF IMPERVIOUS AREA

The City of Cocoa does not currently maintain an impervious area layer within its GIS database system. As a result, our project team was tasked with developing an impervious area database to facilitate the development of the proposed Stormwater Assessments based on impervious area. The database was constructed using a geographical software environment.

Impervious data area was captured by measuring the impervious area on each parcel within the City's municipal limits. The City currently considers any improvement on a parcel that disturbs the natural percolation of water to be impervious. Accordingly, each parcel's impervious area was measured and a parcel specific impervious area database in GIS was created. Stantec identified approximately 55 million square feet of impervious area within the stormwater system service area as shown in blue on the map in Figure 4.1.

Figure 4.1 – City Wide Impervious Area



This data set became the basis for analysis in order to understand the unique parcel configurations in the City and to determine which assessment structure option best suits the community. Our first step in the impervious area analysis was to group properties with similar development characteristics. This grouping allows for the determination of the typical impervious area patterns within each type of development. To facilitate this analysis, properties were grouped into two primary categories including:

- Single Family Residential - Properties with single owner residential development including homes, duplexes, triplexes, mobile homes and other low-density residential uses.
- Non-Single Family Residential - Properties with institutional or commercial development including apartment complexes with greater than three units, and condos.

The impervious area patterns for each of these categories of properties were reviewed. Figure 4.2 shows a histogram of the distribution of the amount of impervious area on 4,773 single family residential properties identified within the City. The distribution shows that the majority of single-family properties in the City have between 2,000 and 6,000 square feet of impervious. The statistical mean impervious area is **3,514 square feet.**

Figure 4.2 - Single Family Residential Impervious Area Distribution

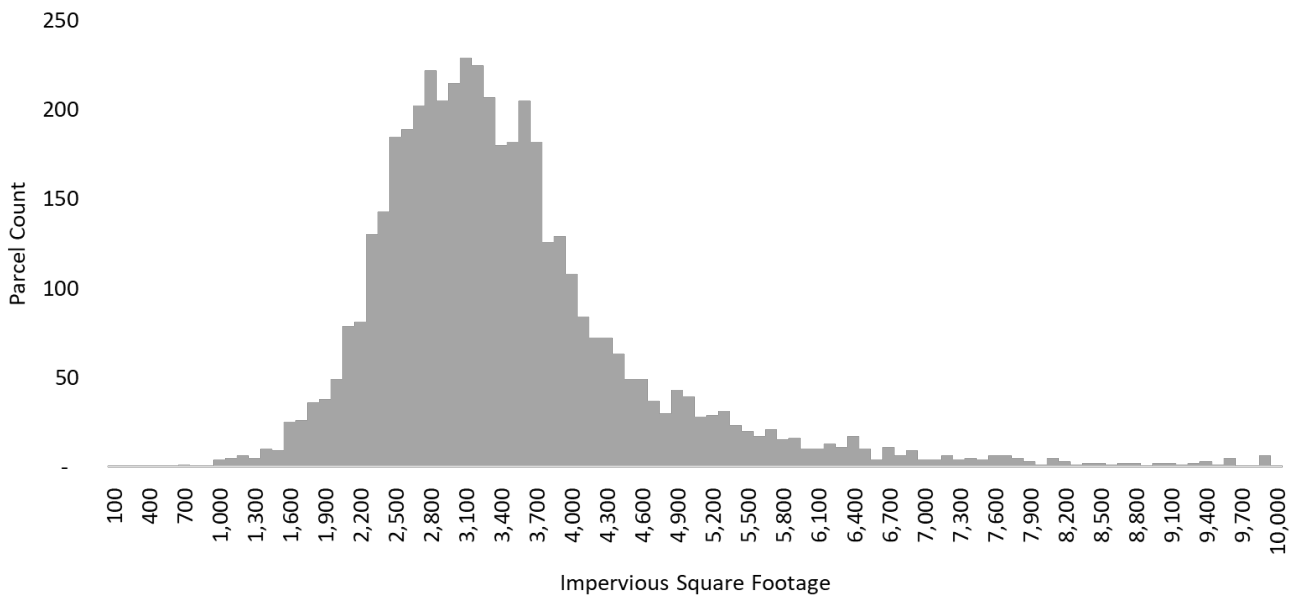
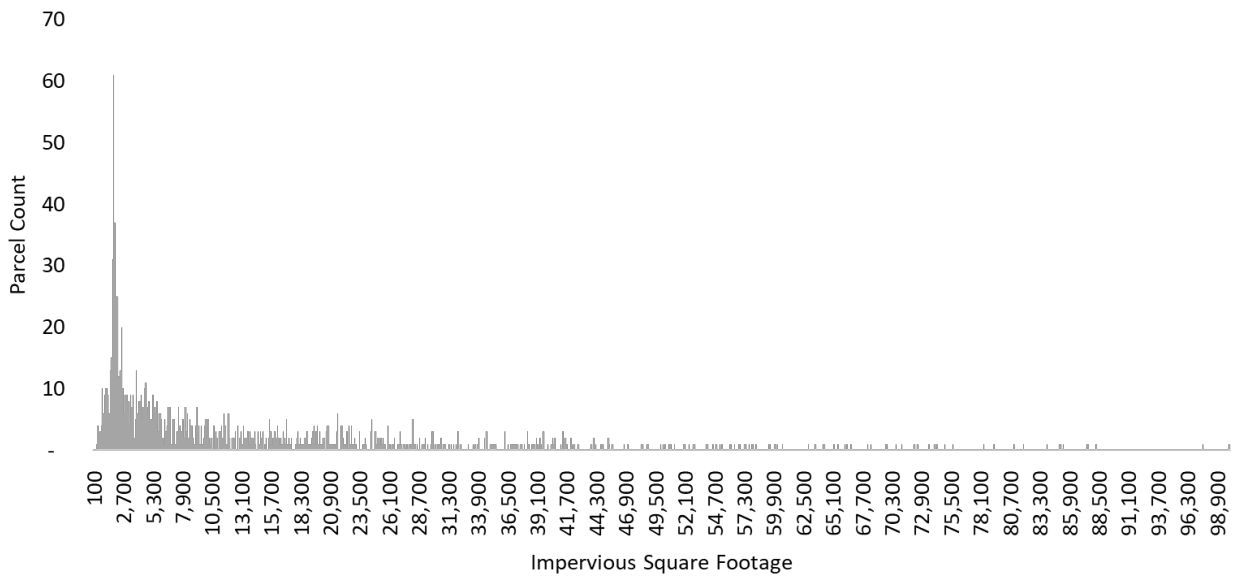


Figure 4.3 presents the distribution of impervious area on non-residential properties within the City. There are 1,486 non-residential properties located within the City. As demonstrated in the figure there is a wide range of impervious area located on these parcels with no apparent pattern. The median impervious area is 28,789 square feet and ranges as high as 3,060,022 square feet.

Figure 4.3 - Non-Residential Impervious Area Distribution



The total impervious area by property type is shown in Table 4.1.

Table 4.1 – Total Impervious Area by Property Type

Land Use	Number of Parcels	Impervious Area	% of Total Impervious
Single Family Residential	4,773	15,949,500	29%
Residential High Density[1]	1,216	1,687,562	3%
Commercial & Industrial[2]	1,609	34,769,684	64%
Governmental	47	2,417,600	4%
Total	**7,645**	**54,824,346**	**100%**

[1]Represents number of condo parcels.
[2]Includes apartments with more than three units.

5. STORMWATER ASSESSMENT STRUCTURE

5.1 STRUCTURE ANALYSIS

Upon selecting impervious area as the basis for the Stormwater Utility assessment and examining the distribution of impervious area on like parcels, it is possible to consider the actual structure of a stormwater assessment. The first step in the assessment structure analysis is to consider how the City might group similar parcel types, effectively creating property classes for stormwater billing. Second, the way in which the stormwater revenue requirement is apportioned to each property class, and to parcels within each property class, must be given significant consideration to ensure the assessment structure is easy to understand, equitable, and administratively efficient.

5.1.1 Property Classes

The City of Cocoa, like most communities, consists of a wide variety of land uses and parcel configurations that make up its property base. Grouping like properties into property classes is appropriate in order to streamline the assessment structure, enhance property owner understanding, and insure administrative efficiency. To develop the stormwater assessment by property classes, our project team examined the property use distribution and parcel configurations in the City, as discussed in the prior section of the report, in order to determine the most appropriate property classifications.

The following four property classes were identified in the Study to provide simplicity and ease of understanding within the stormwater assessment structure. These are common among communities with stormwater utilities as they recognize the common parcel characteristics that exist on each group of parcels.

- **Single Family Residential** – Parcels with single owner residential development including duplexes, triplexes, and other low density residential.
- **Non-Single Family Residential** – Parcels with institutional or commercial development including apartment complexes with more than three units and condominiums.
- **Exempt** – Parcels that receive little or no benefit from the stormwater system, such as public roads and rights-of-way, vacant parcels, railroad tracks, certain educational establishments, Bona-fide agricultural, and parcels with less than 400 square feet of impervious (these parcels were not included in the apportionment of the stormwater revenue requirement and were not included on the assessment roll). The basis for the categories of parcels included in the exempt property class include the following:
    - Public roads and rights-of-way: These properties serve as key components of the stormwater system.
    - Vacant parcels: The impervious area only approach would exclude vacant/undeveloped properties.

  - Certain educational establishments have been determined to have sovereign immunity with regards to Stormwater fees.
  - Bona-fide agricultural operations: Florida statute exempts these properties.
  - Less than 400 square feet of impervious: These properties are exempt to simplify the stormwater assessment structure and to recognize the practical limitations of capturing all impervious area in the City.

  The properties included in the exempt property class are customarily considered exempt from a stormwater assessment by most communities with stormwater utilities across the country for similar reasons listed above.

- **Excluded** – Parcels with governmental ownership (these parcels were included in the allocation of the stormwater revenue requirement but were excluded from the assessment roll as they do not receive a tax bill). Parcels with an excluded designation are billable, but due to particular ownership characteristics (i.e. government) cannot be billed as part of non-ad valorem assessment. As such, this study has calculated the amount of impervious area on these parcels and the parcels were included in the measurement of billable units and apportionment of cost. The total assessment amount for these parcels was calculated and is presented in this study. The City should evaluate its options with regards to revenue recovery goals for these parcels and determine a policy for this property class.

5.1.2 Assessment Structure Options

Upon selecting the property classes, our project team next considered the appropriate mechanism for charging parcels within each class to arrive at a recommended stormwater assessment structure. There are three typical approaches used to develop stormwater assessment structures on a property class level. These approaches include the following:

- Flat Assessment - All parcels within a property class are assessed a flat assessment based on the average impervious area for the class. This approach is often used for single family residential parcels within communities that do not have measurements of impervious area for these parcels or when the community contains a very homogenous distribution of impervious area among single family residential properties.

- Tiered - Properties are placed into tiers based on the actual impervious area on the individual parcel and charged a stormwater assessment based on the associated tier. This approach is commonly used for single family residential parcels within communities with a wider distribution of impervious area and enough data to support the structure. Tiered assessments are a way in which an assessment structure can capture these dynamics in an administratively efficient way and ensure cost recovery is equitable within the residential property class.

- Parcel Specific - Parcels are charged a stormwater assessment based on the actual measured impervious area on the individual parcel. While there are communities that have implemented

stormwater assessment structures that are based on actual impervious area for all property classes, this structure is typically applied to non single-family residential parcels. The significant variation in impervious area on these parcels precludes the use of averages or flat assessment structures.

5.1.3 Assessment Structure Recommendation

The selection of the appropriate assessment structure for each class can be viewed in light of the goals and objectives described earlier. As mentioned earlier, one of the primary goals is to have a stormwater assessment structure that provides a fair and reasonable apportionment of the stormwater revenue requirements to parcels benefitting from the stormwater system in order to align the amount charged to each parcel with its stormwater runoff. It is also important that the assessment structure be easy to understand within the community and easy to administer. For these reasons Stantec recommends that the City utilize the following assessment structure for each class:

- Single Family Residential - Given the relative distribution of impervious area located on these parcels, a tiered assessment for single family residential parcels is recommended. This approach will provide simplicity, while recognizing impervious area differentials and ease of understanding. The tiers should be constructed to capture single-family parcels with below average impervious area footprints, average impervious area footprints and larger than average impervious area footprints. Based on the database of impervious area, a three-tier configuration has been created that conforms to the underlying distribution of impervious area, while accomplishing equity objectives.

- Non-Single Family Residential - A parcel specific assessment structure is recommended based on the actual measured impervious area on each non single-family residential parcel expressed in terms of ERUs or equivalent residential units.

In the determination of the amount of impervious area on each parcel, Stantec rounded impervious area down to the nearest 100 square feet and determined that only parcels with more than 400 sq. ft. of impervious area will be assessed.

For single family parcels as identified herein, Stantec recommends a tiered stormwater assessment structure. Tiers allow the City to recognize differentials in single family parcel impervious area that are of statistical importance and administratively efficiently priced across the entire class of over 4,500 parcels. As such, it is recommended that the City create three tiers based on a statistical distribution of impervious area. The first tier is meant to capture properties below approximately one standard deviation of the mean of impervious area for all single-family homes. The middle tier will capture all parcels with average impervious area footprints and contained within approximately one standard deviation of the mean. A third tier will then capture the remaining parcels whose impervious area footprints are greater than approximately one standard deviation from the mean. Configuring the tier breakpoints based on statistical distribution ensures that the tier break points fit the underlying property data and are not arbitrary. The pricing of each tier has been constructed in this analysis to be based on the median parcel for each tier and ensures pricing

parity per sq. ft. of impervious area billed for each tier. Figure 5.1.1 and Table 5.1 present the recommend distribution of the above described tiers.

Figure 5.1 - Single Family Residential Impervious Area Distribution

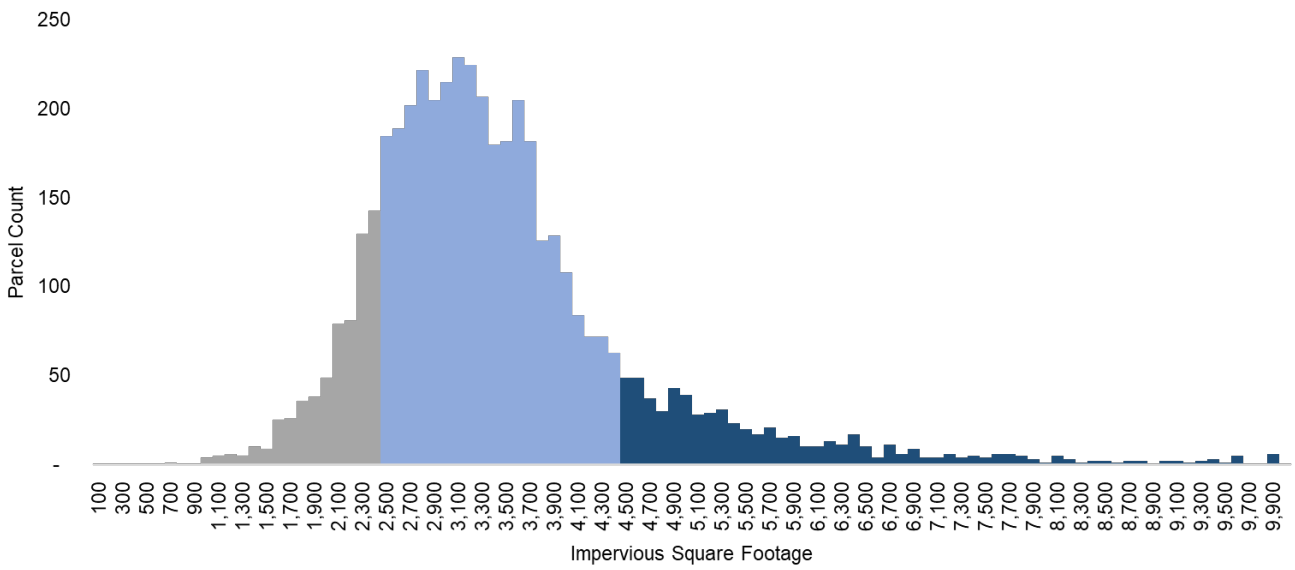


Table 5.1 – Tier Break Points and Parcel Counts

Tier	Tier Size	Number of Parcels	Percentage of Parcels	ERU Basis
Tier 1	400-2,300	674	14%	0.65
Tier 2	2,400-4,400	3,418	72%	1.00
Tier 3	>4,400	681	14%	1.74

Based on the distribution of impervious area for single family parcels, an equivalent residential unit or ERU has been calculated at 3,100 sq. ft. This unit reflects the median impervious area on a tier two single family residential parcel. The ERU is a construct that allows for parcels that are measured on actual area to be billed in terms of ERUs.

Based on the recommended assessment structure for each of the defined property classes it is possible to determine the total number of billable ERUs that were used to determine the stormwater assessment per ERU. Table 5.2 presents the number of ERUs for each defined property class.

Table 5.2 - Number of Billable Units

Property Class	Number of ERUs
Single Family Residential	5,041
Non Single-Family Residential	11,313
Excluded Parcels	724
Total	**17,078**

5.2 CALCULATED STORMWATER ASSESSMENT

This section of the stormwater assessment structure analysis determines the assessments that will be needed to fund the Stormwater Utility based on the revenue requirements of the utility. Table 5.3 presents the calculated annual stormwater assessment per ERU. It should be noted that the assessments shown in the table include an assumption of charges from the Property Appraiser and Tax Collector for billing and collection (discussed in Chapter 5) of 6% of revenues and provide an allowance for mitigation credits equal to 2% of the Stormwater Utility revenue requirement. These adjustments are required to calculate stormwater assessments that will generate the necessary revenues to fund the Stormwater Utility.

Table 5.3 - Annual Stormwater Assessment Calculation

Funding Level	Revenue Required
(A) Stormwater Utility Revenue Requirement	$1,744,683
(B) Tax Collector Fee & Prepayment Discount	$104,680
(C) Allowance for Credits	$41,338
Total Revenue Requirement	**$1,890,701**
Billable ERUs	**17,078**
Annual Assessment Per ERU	**$110.71**

Importantly, the annual stormwater assessment per ERU includes 724 ERUs that are governmental in ownership and as such they cannot receive a tax bill. The City may wish to explore other means of collection for these parcels.

Once the calculated assessment per ERU was calculated as presented in Table 5.3 it was possible to determine the resulting annual stormwater assessments for the single-family tiers described in table 5.4. The assessment levels by tier are based on the statistical distribution of single-family parcels and the midpoint impervious area footprint by tier, shown in the ERU allocation below.

Table 5.4 - Annual Stormwater Assessment Calculation for Tiered Assessments

Funding Level	ERU Allocation	Annual Assessment
Annual Assessment Per ERU	1	$110.71
Tier 1	0.65	$71.96
Tier 2	1.00	$110.71
Tier 3	1.74	$192.64

5.2.1 Single Family Residential Assessment

All single-family residential parcels are placed into one of 3 tiers for billing purposes based on their measured impervious area. Properties are considered to be .65 ERU in the first tier,1.00 ERU in the second, and 1.74 ERUs in the third. The assessment for single family parcels is dependent on the tier in which they reside based on the amount of impervious area measured on the parcel. As impervious area can vary within single family homes, the following figures illustrate varying scenarios. Figure 5.2 represents the experience of a single family parcel in the first tier with smaller than average impervious area, Figure 5.3 indicates a single family parcel with an average amount of impervious area, and Figure 5.4 displays a single family parcel with more impervious area than the average single family home.

Figure 5.2 – Sample Single Family Residential Property (Tier 1)

Parcel Characteristics	
Measured Area	2,012
Billed Area	2,000
Assessment Type	Tier 1
Annual Stormwater Assessment	**$71.96**
Current Effective Annual Stormwater Fee	$87.00
Difference	(15.04)
Change	-17%

Figure 5.3 – Sample Single Family Residential Property (Tier 2)

Parcel Characteristics	
Measured Area	4,090
Billed Area	4,000
Assessment Type	Tier 2
Annual Stormwater Assessment	**$110.71**
Current Effective Annual Stormwater Fee	$87.00
Difference	$23.71
Change	27%

Figure 5.4 – Sample Single Family Residential Property (Tier 3)

Parcel Characteristics	
Measured Area	5,631
Billed Area	5,600
Assessment Type	Tier 3
Annual Stormwater Assessment	**$192.64**
Current Effective Annual Stormwater Fee	$87.00
Difference	$105.84
Change	121%

5.2.2 Non Single-Family Residential Assessment

The following example is provided to demonstrate how the stormwater assessment structure will apply to non single-family residential parcels. Figure 5.5 presents a sample non single family residential property located within the City. The variation in each parcel's assessment is unique to each parcel based on the measured impervious area of the parcel.

Figure 5.5 - Sample Non-Residential Property

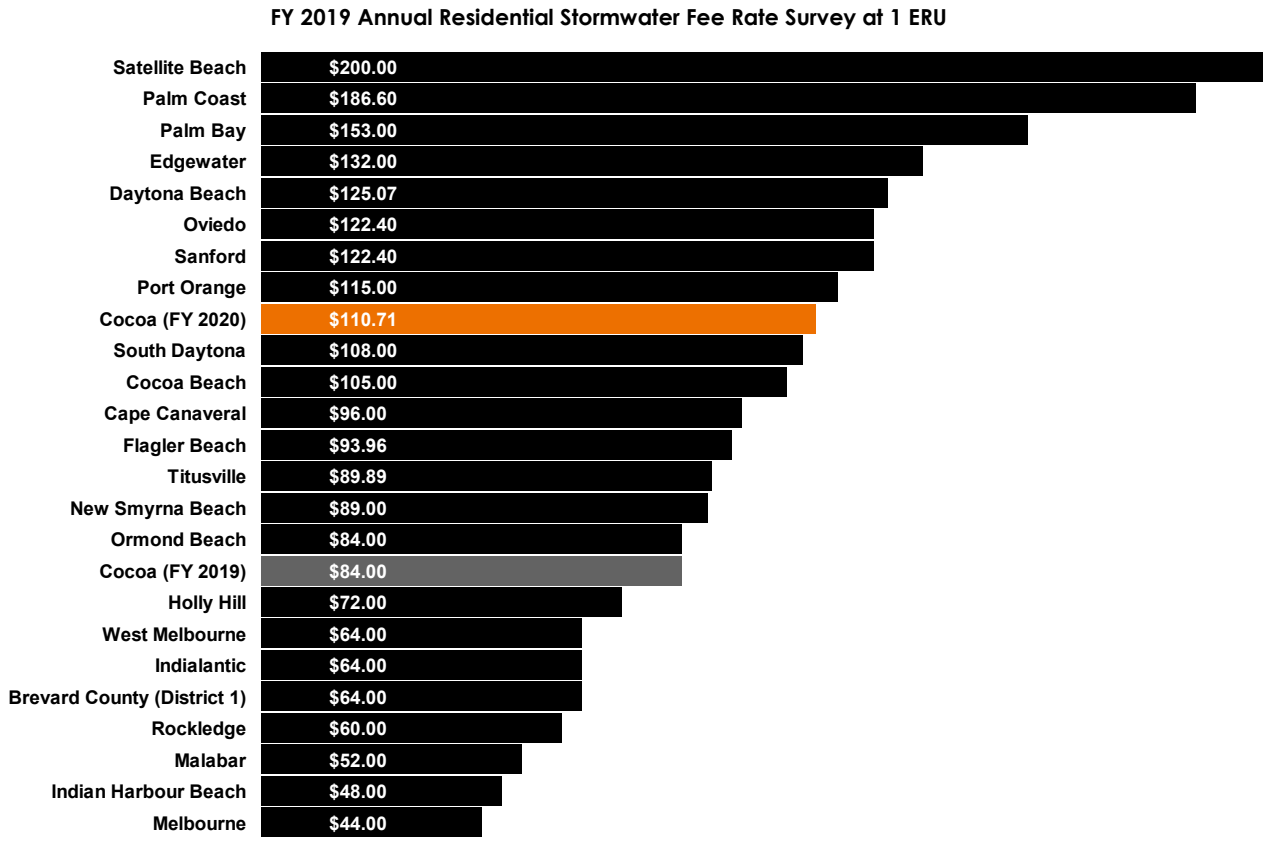
Parcel Characteristics	
Measured Area	34,950
Billed Area	34,900
Billed ERU	10.9
Assessment Type	Measured
Annual Stormwater Assessment	**$1,206.74**
Current Effective Annual Stormwater Fee	$911.28
Difference	$295.46
Change	32%

For parcels containing stacked parcels such as residential condos, the stormwater assessment is generated in the same fashion as a non-single family parcel, but the amount of total impervious area, including common areas, is allocated to each condo parcel by the living area in each taxable condo parcel in order to arrive at an equitable amount of billable impervious area for each stacked condo parcel.

5.3 STORMWATER ASSESSMENT / UTILITY FEE COMPARISON

There are currently approximately 180 communities in Florida with stormwater utilities. To provide insight into how stormwater assessments/utility fees from comparable and local communities align with the assessments calculated in this study, a local benchmarking comparison was developed. Figure 5.6 presents a comparison of the annual stormwater assessments/fees for local utilities.

Figure 5.6 - Stormwater Assessment / Utility Fee Benchmarking Comparison



5.4 STORMWATER CREDITS

We recommend that parcels that engage in onsite stormwater management may receive a credit on their Stormwater Assessment in order to recognize the benefit of the activity to reduce the volume of stormwater leaving the properties, or enhance the quality of the runoff, thereby, reducing the burden on the City's stormwater system. The intent and purpose of the credit is to maintain equity for property owners with onsite stormwater management because such property owners have invested in measures to reduce stormwater runoff from their property and therefore reducing the effort required by the City to manage their stormwater runoff.

We recommend that in order for a property owner to obtain a credit, the property owner must demonstrate a specified reduction of stormwater to the City's stormwater system from the property by providing onsite attenuation for a minimum storm event required by the St. Johns River Water Management District, pursuant to applicable law.

We also recommend that application and eligibility requirements to obtain a credit shall be determined by written administrative policy approved by the City Manager, provided such policy shall be consistent and not in conflict with the Resolution for this assessment, and supported by a written technical memorandum prepared by the City's stormwater assessment consultant evidencing a fair and equitable method of determining the applicable credit.

Disclaimer

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In preparing this report, Stantec utilized information and data obtained from the City of Cocoa or public and/or industry sources. Stantec has relied on the information and data without independent verification, except only to the extent such verification is expressly described in this document. Any projections of future conditions presented in the document are not intended as predictions, as there may be differences between forecasted and actual results, and those differences may be material.

Additionally, the purpose of this document is to summarize Stantec's analysis and findings related to this project, and it is not intended to address all aspects that may surround the subject area. Therefore, this document may have limitations, assumptions, or reliances on data that are not readily apparent on the face of it. Moreover, the reader should understand that Stantec was called on to provide judgments on a variety of critical factors which are incapable of precise measurement. As such, the use of this document and its findings by the City of Cocoa should only occur after consultation with Stantec, and any use of this document and findings by any other person is done so entirely at their own risk.

APPENDIX A: RSA SUPPORTING SCHEDULES

Schedule 1 - Contains the assumptions of the RSA, including developed property growth assumptions

Schedule 2 - Identifies the end of FY 2018 fund balances that serve as the FY 2019 beginning balances of the analysis

Schedule 3 - Presents a list of all projected cash inflows from FY 2019 - FY 2029

Schedule 4 - Presents a list of all projected cash outflows from FY 2019 - FY 2029

Schedule 5 - Presents a list of all cost escalation factors utilized in the projection of cash outflows

Schedule 6 - Provides a detailed listing the annual capital improvement projects from FY 2019 through FY 2029

Schedule 7 - Contains the FAMS-XL Control Panel that presents a summary of the financial management plan, including annual assessment increases, debt service coverage ratios, total CIP spending levels, property impacts, and fund balances

Schedule 8 - Presents the projected annual net income, debt coverage, and cash flow results

Schedule 9 - Shows the projected funding sources for the capital improvement program

Schedule 10 - Presents a fund-level cash flow reconciliation, providing the beginning balance in each year, the amount utilized for project funding or payment of debt service, interest earnings calculations, and the end of year fund balance

Schedule 11 – Borrowing projections including interest rate and debt service.

Assumptions

Schedule 1

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Rate Increase Adoption Date	10/1/2018	10/1/2019	10/1/2020	10/1/2021	10/1/2022	10/1/2023	10/1/2024	10/1/2025	10/1/2026	10/1/2027	10/1/2028
Annual Growth											
Stormwater											
Ending # of Equivalent Units	24,097	24,190	24,283	24,378	24,473	24,568	24,661	24,758	24,853	24,951	25,048
Equivalent Unit Growth	(115)	93	93	95	95	94	94	96	95	98	97
% Change in Equivalent Units	*-0.47%*	*0.38%*	*0.39%*	*0.39%*	*0.39%*	*0.39%*	*0.38%*	*0.39%*	*0.39%*	*0.39%*	*0.39%*
Capital Spending											
Annual Capital Budget (Future Year Dollars)	$ 385,000	$ 3,033,880	$ 2,241,813	$ 449,492	$ 329,364	$ 1,573,026	$ 194,663	$ 1,617,971	$ 410,490	$ 1,352,494	$ 1,169,089
Annual Percent Executed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Average Annual Interest Earnings Rate											
On Fund Balances	0.25%	0.50%	0.75%	1.00%	1.25%	1.50%	1.75%	2.00%	2.00%	2.00%	2.00%
Operating Budget Reserve											
Target (Number of Months of Reserve)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Operating Budget Execution Percentage											
Personal Services	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Variable Operations and Maintenance	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Fixed Operations and Maintenance	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Capital Outlay	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

FY 2019 Beginning Balances — Schedule 2

Stantec Grouping of Funds in Model		Revenue Fund
Current Unrestricted Assets		
Cash and Cash Equivalents	$	624,521
Investments		194,349
Accounts Reveivable, Earned		
Billed (net)		224,066
Unbilled		46,348
Interest Receivable		913
Prepaid Items		5,939
Total Assets	**$**	**1,096,136**
Current Liabilities		
Accounts and Claims Payable	$	(282,985)
Accrued Payroll and Related Liabilities		(8,958)
Compensated Absences		(5,680)
Calculated Fund Balance (Assets - Liabilities)	**$**	**798,513**
Plus/(Less): Prepaid Items		(5,939)
Net Unrestricted Fund Balance	**$**	**792,574**
Available Fund Balance	**$**	**792,574**

Fund Summary

Revenue Fund	$	792,574
Total Available Funds	**$**	**792,574**

Projection of Cash Inflows

Schedule 3

		FY 2019[1]	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
1	**Rate Revenue Growth Assumptions**											
2	% Change in Revenue	-0.47%	0.38%	0.39%	0.39%	0.39%	0.39%	0.38%	0.39%	0.39%	0.39%	0.39%
3	**Assumed Rate Revenue Increases**	3.70%	9.00%	9.00%	9.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
4	**Stormwater Rate Revenue**	$ 1,594,500	$ 1,744,683	$ 1,909,050	$ 2,089,002	$ 2,160,051	$ 2,233,425	$ 2,309,195	$ 2,387,769	$ 2,468,886	$ 2,552,959	$ 2,639,733
5	**Total Stormwater Rate Revenue**	**$ 1,594,500**	**$ 1,744,683**	**$ 1,909,050**	**$ 2,089,002**	**$ 2,160,051**	**$ 2,233,425**	**$ 2,309,195**	**$ 2,387,769**	**$ 2,468,886**	**$ 2,552,959**	**$ 2,639,733**
6	**Interest Income**											
7	Unrestricted	$ 1,970	$ 2,973	$ 3,090	$ 4,243	$ 5,463	$ 6,754	$ 10,755	$ 12,574	$ 10,831	$ 11,132	$ 10,467
8	**Total Interest Income**	**$ 1,970**	**$ 2,973**	**$ 3,090**	**$ 4,243**	**$ 5,463**	**$ 6,754**	**$ 10,755**	**$ 12,574**	**$ 10,831**	**$ 11,132**	**$ 10,467**
9	**Total Cash Inflows**	**$ 1,596,470**	**$ 1,747,656**	**$ 1,912,139**	**$ 2,093,245**	**$ 2,165,514**	**$ 2,240,179**	**$ 2,319,951**	**$ 2,400,343**	**$ 2,479,717**	**$ 2,564,092**	**$ 2,650,200**

[1] The FY 2019 rate revenue increase of 3.70% represents the actual rate increase from $6.75 per SFU per month in FY 2018 to $7.00 per SFU per month in FY 2019.

Projection of Cash Outflows

Schedule 4

	Account Number	Expense Line Item	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
		Personnel Services											
1	423-3570-538.12-00	Regular Salaries & Wages	$ 397,853	$ 409,789	$ 422,082	$ 434,745	$ 447,787	$ 461,221	$ 475,057	$ 489,309	$ 503,988	$ 519,108	$ 534,681
2	423-3570-538.13-00	Other Salaries & Wages	44,089	45,412	46,774	48,177	49,623	51,111	52,645	54,224	55,851	57,526	59,252
3	423-3570-538.14-00	Overtime	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720
4	423-3570-538.20-00	Clothing/Shoe Allowance	550	567	583	601	619	638	657	676	697	718	739
5	423-3570-538.21-00	FICA Taxes	31,629	32,578	33,555	34,562	35,599	36,667	37,767	38,900	40,067	41,269	42,507
6	423-3570-538.22-00	Retirement Contributions	41,798	43,052	44,343	45,674	47,044	48,455	49,909	51,406	52,948	54,537	56,173
7	423-3570-538.23-00	Life/Health Insurance	120,858	129,318	135,784	142,573	149,702	157,187	165,046	173,299	181,963	191,062	200,615
8	423-3570-538.24-00	Worker's Compensation	58,003	59,743	61,535	63,381	65,283	67,241	69,259	71,336	73,476	75,681	77,951
9	423-3570-538.27-00	Cafeteria Plan	7,680	7,910	8,148	8,392	8,644	8,903	9,170	9,445	9,729	10,021	10,321
10		Movement of PS Expenses to GF	-	(183,441)	(188,944)	(194,613)	(200,451)	(206,464)	(212,658)	(219,038)	(225,609)	(232,378)	(239,349)
		Operating Expenses											
11	423-3570-538.31-00	Professional Services	$ 211,441	$ 217,784	$ 224,318	$ 231,047	$ 237,979	$ 245,118	$ 252,472	$ 260,046	$ 267,847	$ 275,883	$ 284,159
12	423-3570-538.31-01	Professional Services	500	515	530	546	563	580	597	615	633	652	672
13	423-3570-538.31-33	Professional Services	6,300	6,489	6,684	6,884	7,091	7,303	7,523	7,748	7,981	8,220	8,467
14	423-3570-538.34-00	Contract Services	7,200	7,416	7,638	7,868	8,104	8,347	8,597	8,855	9,121	9,394	9,676
15	423-3570-538.34-10	Cost of General Fund Services	94,343	172,205	177,371	182,692	188,173	193,818	199,633	205,622	211,790	218,144	224,688
16	423-3570-538.39-00	Contingency	6,666	6,766	6,867	6,970	7,075	7,181	7,289	7,398	7,509	7,622	7,736
17	423-3570-538.40-00	Travel & Per Diem	4,800	4,872	4,945	5,019	5,095	5,171	5,249	5,327	5,407	5,488	5,571
18	423-3570-538.41-00	Communication	1,224	1,242	1,261	1,280	1,299	1,319	1,338	1,358	1,379	1,400	1,421
19	423-3570-538.42-00	Postage & Freight	750	761	773	784	796	808	820	832	845	858	870
20	423-3570-538.43-00	Electric/Water/Sewer	17,456	18,329	19,245	20,207	21,218	22,279	23,393	24,562	25,790	27,080	28,434
21	423-3570-538.44-00	Rentals And Leases	5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717	5,803
22	423-3570-538.45-00	Insurance	4,954	5,202	5,462	5,735	6,022	6,323	6,639	6,971	7,319	7,685	8,070
23	423-3570-538.46-00	Repairs & Maintenance	37,500	38,625	39,784	40,977	42,207	43,473	44,777	46,120	47,504	48,929	50,397
24	423-3570-538.46-03	Repairs & Maintenance	35,873	36,949	38,058	39,199	40,375	41,587	42,834	44,119	45,443	46,806	48,210
25	423-3570-538.47-00	Printing & Binding	1,000	1,015	1,030	1,046	1,061	1,077	1,093	1,110	1,126	1,143	1,161
26	423-3570-538.49-00	Other Charges & Oblig.	2,500	2,538	2,576	2,614	2,653	2,693	2,734	2,775	2,816	2,858	2,901
27	423-3570-538.49-07	Other Charges & Oblig.	10,000	10,150	10,302	10,457	10,614	10,773	10,934	11,098	11,265	11,434	11,605
28	423-3570-538.52-00	Operating Supplies	14,144	14,356	14,572	14,790	15,012	15,237	15,466	15,698	15,933	16,172	16,415
29	423-3570-538.52-30	Operating Supplies	22,934	23,278	23,627	23,982	24,341	24,706	25,077	25,453	25,835	26,223	26,616
30	423-3570-538.52-33	Operating Supplies	3,200	3,248	3,297	3,346	3,396	3,447	3,499	3,552	3,605	3,659	3,714
31	423-3570-538.54-00	Membership/Publications	1,100	1,117	1,133	1,150	1,167	1,185	1,203	1,221	1,239	1,258	1,277
32	423-3570-538.55-00	Training	4,500	4,568	4,636	4,706	4,776	4,848	4,920	4,994	5,069	5,145	5,222
33		Pond Maintenance	-	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
34		Annual Curb & Gutter R&M Program	20,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
35		Additional O&M Expenses[1]	-	20,000	20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095
		Capital Outlay											
36		Replace or Line Corrugated Metal Pipe (CMP	$ -	$ 193,750	$ 193,750	$ 193,750	$ 193,750	$ 193,750	$ -	$ -	$ -	$ -	$ -
		Total Expenses by Category											
37		Personal Services	$ 707,460	$ 550,077	$ 569,166	$ 588,956	$ 609,477	$ 630,755	$ 652,821	$ 675,707	$ 699,444	$ 724,067	$ 749,610
38		Variable Operations & Maintenance	17,456	18,329	19,245	20,207	21,218	22,279	23,393	24,562	25,790	27,080	28,434
39		Operations & Maintenance	495,929	649,170	665,615	682,540	699,960	717,891	736,346	755,343	774,897	795,026	815,745
40		Capital Outlay	-	193,750	193,750	193,750	193,750	193,750	-	-	-	-	-
41		**Total Expenses**	**$ 1,220,845**	**$ 1,411,326**	**$ 1,447,776**	**$ 1,485,454**	**$ 1,524,405**	**$ 1,564,674**	**$ 1,412,560**	**$ 1,455,612**	**$ 1,500,132**	**$ 1,546,172**	**$ 1,593,789**
		Expense Execution Factors											
42		Personal Services	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
43		Variable Operations & Maintenance	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
44		Operations & Maintenance	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
45		Capital Outlay	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		Total Expenses at Execution											
46		Personal Services	$ 707,460	$ 550,077	$ 569,166	$ 588,956	$ 609,477	$ 630,755	$ 652,821	$ 675,707	$ 699,444	$ 724,067	$ 749,610
47		Variable Operations & Maintenance	17,456	18,329	19,245	20,207	21,218	22,279	23,393	24,562	25,790	27,080	28,434
48		Operations & Maintenance	495,929	649,170	665,615	682,540	699,960	717,891	736,346	755,343	774,897	795,026	815,745
49		Capital Outlay	-	193,750	193,750	193,750	193,750	193,750	-	-	-	-	-
50	`	**Total Expenses at Execution**	**$ 1,220,845**	**$ 1,411,326**	**$ 1,447,776**	**$ 1,485,454**	**$ 1,524,405**	**$ 1,564,674**	**$ 1,412,560**	**$ 1,455,612**	**$ 1,500,132**	**$ 1,546,172**	**$ 1,593,789**
		Debt Service											
51		Cumulative New Debt Service	-	206,863	299,073	299,073	374,729	397,503	397,503	442,809	456,447	456,447	531,224
52		**Total Debt Service**	**$ -**	**$ 206,863**	**$ 299,073**	**$ 299,073**	**$ 374,729**	**$ 397,503**	**$ 397,503**	**$ 442,809**	**$ 456,447**	**$ 456,447**	**$ 531,224**
53		**Total Cash Outflows**	**$ 1,220,845**	**$ 1,618,190**	**$ 1,746,849**	**$ 1,784,527**	**$ 1,899,133**	**$ 1,962,177**	**$ 1,810,063**	**$ 1,898,421**	**$ 1,956,579**	**$ 2,002,620**	**$ 2,125,013**

[1] Reflects O&M costs related to the "Riverfront Park In-Lagoon Nutrient Removal Facility" and the "Diamond Square Verizon Stormwater Pond" projects, per dicussions with City Staff.

Cost Escalation Factors

Schedule 5

Account Number	Expense Line Item Description	Inflation Factor	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
	Personnel Services											
423-3570-538.12-00	Regular Salaries & Wages	Salaries & Wages	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.13-00	Other Salaries & Wages	Salaries & Wages	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.14-00	Overtime	Salaries & Wages	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.20-00	Clothing/Shoe Allowance	Personnel Services	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.21-00	FICA Taxes	Salaries & Wages	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.22-00	Retirement Contributions	Retirement	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.23-00	Life/Health Insurance	Health Insurance	7.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
423-3570-538.24-00	Worker's Compensation	Salaries & Wages	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.27-00	Cafeteria Plan	Personnel Services	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
	Operating Expenses											
423-3570-538.31-00	Professional Services	Professional/Contract Services	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.31-01	Professional Services	Professional/Contract Services	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.31-33	Professional Services	Professional/Contract Services	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.34-00	Contract Services	Professional/Contract Services	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.34-10	Contract Services	Professional/Contract Services	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.39-00	Contingency	Default Inflation Factor	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
423-3570-538.40-00	Travel & Per Diem	Fixed O&M Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
423-3570-538.41-00	Communication	Fixed O&M Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
423-3570-538.42-00	Postage & Freight	Fixed O&M Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
423-3570-538.43-00	Electric/Water/Sewer	Fuel, Utilities, Chemicals	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
423-3570-538.44-00	Rentals And Leases	Fixed O&M Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
423-3570-538.45-00	Insurance	Other Insurance	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
423-3570-538.46-00	Repairs & Maintenance	Repair & Maintenance	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.46-03	Repairs & Maintenance	Repair & Maintenance	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
423-3570-538.47-00	Printing & Binding	Fixed O&M Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
423-3570-538.49-00	Other Charges & Oblig.	Fixed O&M Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
423-3570-538.49-07	Other Charges & Oblig.	Fixed O&M Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
423-3570-538.52-00	Operating Supplies	Fixed O&M Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
423-3570-538.52-30	Operating Supplies	Fixed O&M Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
423-3570-538.52-33	Operating Supplies	Fixed O&M Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
423-3570-538.54-00	Membership/Publications	Fixed O&M Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
423-3570-538.55-00	Training	Fixed O&M Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
	Pond Maintenance	Default Inflation Factor	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
	Replace or Line Corrugated Metal Pipe (CMI	CIP Escalation	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
	Annual Curb & Gutter R&M Program	CIP Escalation	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
	Weighted Average Increase in O&M Expenses [1]		-0.27%	2.99%	3.00%	3.02%	3.03%	3.04%	3.05%	3.06%	3.07%	3.08%

[1] The Weighted Average Increase in O&M Expenses is reflective of the cost escalation factors presented on this schedule and the cost execution factors on Schedule 1.

Capital Improvement Program

Schedule 6

	Project Description	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
	FY 2019 Capital Improvements											
1	Annual Cured in Place Pipe Lining	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	Stormwater GIS Asset Mapping	50,000	-	-	-	-	-	-	-	-	-	-
3	US1 and Forrest Ave Stormwater Facility	135,000	-	-	-	-	-	-	-	-	-	-
	Flood Mitigation											
4	Range Road Ditch Piping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 387,000	$ -	$ -	$ -
5	Junction Structure at Plaza Parkway & Highland Drive C	-	-	-	-	-	-	-	-	165,848	-	-
6	Pineda St. Drainage Improvements - Peachtree to Dixor	-	-	-	-	233,415	933,660	-	-	-	-	-
7	Bracco Pond Outfall and Discharge Structure	-	-	-	-	-	-	-	-	-	-	536,445
8	Replace or Line Corrugated Metal Pipe (CMP) Piping[1]	-	-	-	-	-	-	-	-	-	-	-
9	Driveway Culvert Replacements (Cox Road)	-	-	254,709	254,709	-	-	-	-	-	-	-
10	Provost Park / Pinegrove Park Ditch Piping	-	-	-	-	-	-	-	244,125	-	-	-
11	Fairfax Ln. Exfiltration Expansion, Highpoint Subdivision	-	-	353,808	-	-	-	-	-	-	-	-
12	Cocoa North Rear Yard Ditch Piping (London Blvd. to W	-	-	-	-	-	-	99,918	399,672	99,918	399,672	-
13	Annual Curb & Gutter R&M Program[1]	-	-	-	-	-	-	-	-	-	-	-
14	West Dixon Blvd. Stormwater Facility	-	-	-	-	-	-	-	-	-	-	291,564
15	iWorks Integration Between GIS and Operations & Main	-	77,777	-	-	-	-	-	-	-	-	-
16	Comprehensive System Model	-	125,000	-	-	-	-	-	-	-	-	-
17	Mud Lake Improvements	-	-	-	-	-	-	-	77,770	-	-	-
	Water Quality Projects											
18	Project WQ-10: 72" Outfall Baseflow Capture Treatment	$ -	$ 1,216,663	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
19	Project WQ-11: Horseshoe Ponds (North & South) Vege	-	236,670	-	-	-	-	-	-	-	-	-
20	Project WQ-12: Verizon Stormwater Pond in Diamon Sq	-	549,643	-	-	-	-	-	-	-	-	-
21	Project WQ-15: Add Floating Wetlands to Existing Storn	-	206,635	68,000	68,000	68,000	68,000	68,000	68,000	68,000	68,000	68,000
22	Project WQ-16: Riverfront Park In-Lagoon Nutrient Rem	-	-	1,500,000	-	-	-	-	-	-	-	-
23	Project WQ-20: De-muck/Dredge SR 520 Relief Channe	-	282,900	-	-	-	-	-	-	-	-	-
	Major Equipment Replacement Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
24	ISUZU FVR TYMCO 500X	-	338,592	-	-	-	-	-	-	-	-	-
25	FORD F150	-	-	-	25,989	-	-	-	-	-	-	-
26	FORD 350SD	-	-	-	74,991	-	-	-	-	-	-	-
27	International TYMCO 600X	-	-	-	-	-	395,953	-	-	-	-	-
28	Sterling Acterra	-	-	-	-	-	-	-	178,459	-	-	-
29	FORD VAC-CON	-	-	-	-	-	-	-	-	-	599,999	-
30	**Total CIP Budget (in current dollars)[2]**	**$ 385,000**	**$ 3,033,880**	**$ 2,176,517**	**$ 423,689**	**$ 301,415**	**$ 1,397,613**	**$ 167,918**	**$ 1,355,026**	**$ 333,766**	**$ 1,067,671**	**$ 896,009**
31	Cumulative Projected Cost Escalation[3]	0.0%	0.0%	3.0%	6.1%	9.3%	12.6%	15.9%	19.4%	23.0%	26.7%	30.5%
32	**Resulting CIP Funding Level**	**$ 385,000**	**$ 3,033,880**	**$ 2,241,813**	**$ 449,492**	**$ 329,364**	**$ 1,573,026**	**$ 194,663**	**$ 1,617,971**	**$ 410,490**	**$ 1,352,494**	**$ 1,169,089**
33	Annual CIP Execution Percentage	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
34	**Final CIP Funding Level**	**$ 385,000**	**$ 3,033,880**	**$ 2,241,813**	**$ 449,492**	**$ 329,364**	**$ 1,573,026**	**$ 194,663**	**$ 1,617,971**	**$ 410,490**	**$ 1,352,494**	**$ 1,169,089**

[1] The replacement of corrugated metal pipe and the annual curb and gutter R&M program are treated as minor capital outlay and O&M expenses, respectively (see schedule 4).

[2] The CIP plan on this schedule was developed per discussions with City Staff and updated on July 30, 2019 per discussions with the engineering team "Mead and Hunt" .

[3] CIP Escalation factors are consistent with the Engineering News Record Construction Cost Index.

FAMS - Control Panel **Schedule 7**

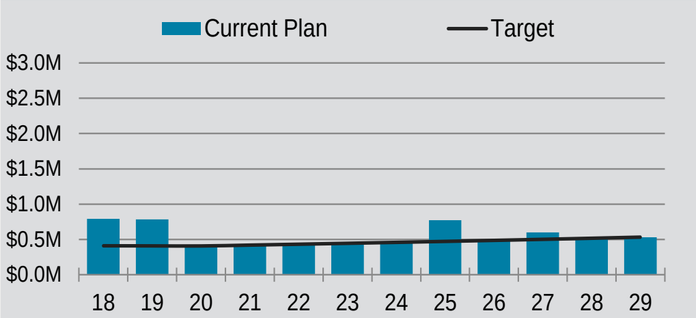
FAMS-XL | CITY OF COCOA

Stantec

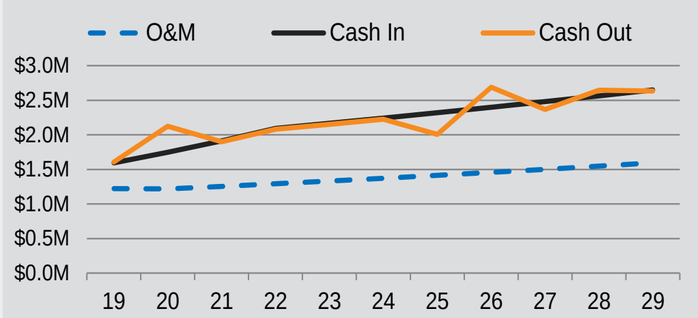
CALC SAVE CTRL LAST OVR

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2025	FY 2029
Revenue Adjusment Plan	0.00%	9.00%	9.00%	9.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	37.39%	59.27%
Senior-Lien DSC	0.00	2.56	2.20	2.68	2.23	2.19	2.28	2.13	2.15	2.23	1.99	Scenario Manager	

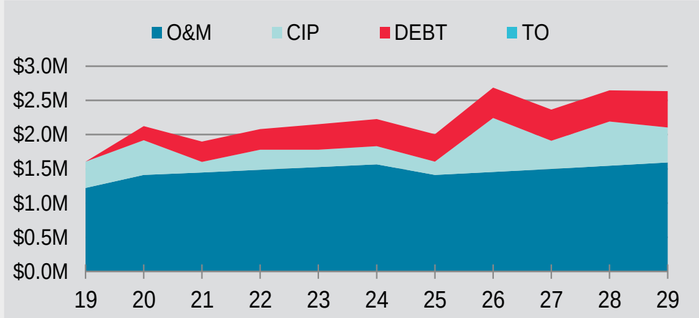
Operating Fund



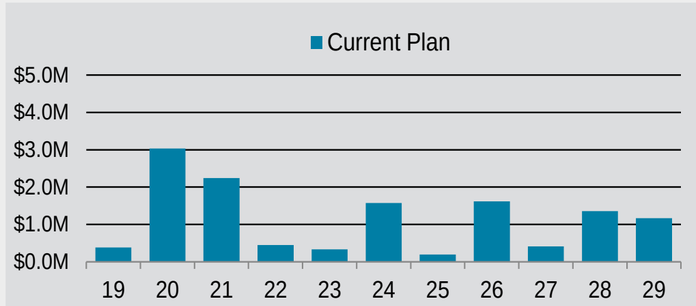
Revenues vs. Expenses



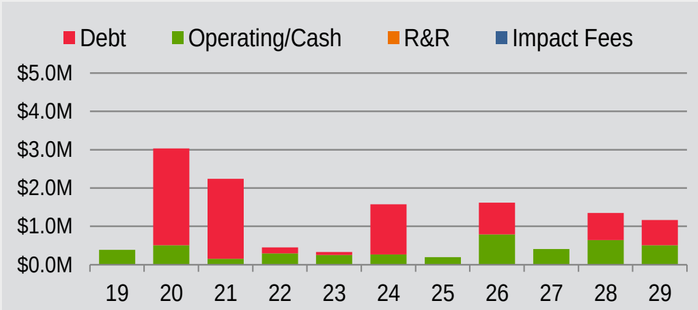
Expenses by Type



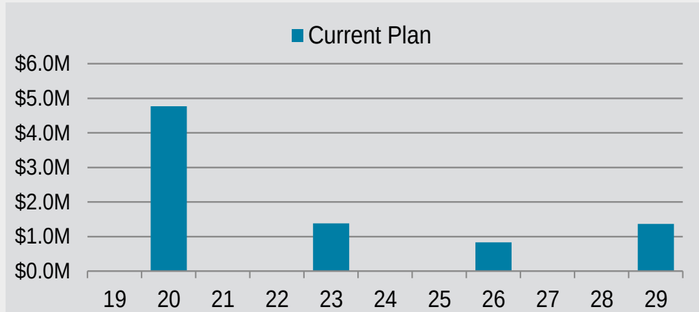
CIP Spending



CIP Funding



Borrowing



Pro Forma

Schedule 8

			FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
	Operating Revenue												
1	Stormwater Rate Revenue		$ 1,594,500	$ 1,594,500	$ 1,744,683	$ 1,909,050	$ 2,089,002	$ 2,160,051	$ 2,233,425	$ 2,309,195	$ 2,387,769	$ 2,468,886	$ 2,552,959
2	Change in Revenue From Growth		-	6,126	6,739	7,466	8,135	8,323	8,512	9,027	9,208	9,715	9,889
3	Subtotal		$ 1,594,500	$ 1,600,627	$ 1,751,422	$ 1,916,515	$ 2,097,136	$ 2,168,374	$ 2,241,937	$ 2,318,223	$ 2,396,977	$ 2,478,601	$ 2,562,848
4	*Weighted Average Rate Increase*		*0.00%*	*9.00%*	*9.00%*	*9.00%*	*3.00%*	*3.00%*	*3.00%*	*3.00%*	*3.00%*	*3.00%*	*3.00%*
5	Additional Rate Revenue From Rate Increase		-	144,056	157,628	172,486	62,914	65,051	67,258	69,547	71,909	74,358	76,885
6	Total Rate Revenue		$ 1,594,500	$ 1,744,683	$ 1,909,050	$ 2,089,002	$ 2,160,051	$ 2,233,425	$ 2,309,195	$ 2,387,769	$ 2,468,886	$ 2,552,959	$ 2,639,733
7	Plus: Other Operating Revenue		-	-	-	-	-	-	-	-	-	-	-
8	**Equals: Total Operating Revenue**		**$ 1,594,500**	**$ 1,744,683**	**$ 1,909,050**	**$ 2,089,002**	**$ 2,160,051**	**$ 2,233,425**	**$ 2,309,195**	**$ 2,387,769**	**$ 2,468,886**	**$ 2,552,959**	**$ 2,639,733**
	Less: Operating Expenses												
9	Personal Services		$ (707,460)	$ (550,077)	$ (569,166)	$ (588,956)	$ (609,477)	$ (630,755)	$ (652,821)	$ (675,707)	$ (699,444)	$ (724,067)	$ (749,610)
10	Variable Operations & Maintenance Costs		(17,456)	(18,329)	(19,245)	(20,207)	(21,218)	(22,279)	(23,393)	(24,562)	(25,790)	(27,080)	(28,434)
11	Operations & Maintenance Costs		(495,929)	(649,170)	(665,615)	(682,540)	(699,960)	(717,891)	(736,346)	(755,343)	(774,897)	(795,026)	(815,745)
12	**Equals: Net Operating Income**		**$ 373,655**	**$ 527,107**	**$ 655,024**	**$ 797,298**	**$ 829,396**	**$ 862,501**	**$ 896,635**	**$ 932,157**	**$ 968,754**	**$ 1,006,787**	**$ 1,045,944**
	Plus: Non-Operating Income/(Expense)												
13	Interest Income		$ 1,970	$ 2,973	$ 3,090	$ 4,243	$ 5,463	$ 6,754	$ 10,755	$ 12,574	$ 10,831	$ 11,132	$ 10,467
14	**Equals: Net Income**		**$ 375,625**	**$ 530,079**	**$ 658,113**	**$ 801,541**	**$ 834,859**	**$ 869,255**	**$ 907,390**	**$ 944,731**	**$ 979,585**	**$ 1,017,920**	**$ 1,056,411**
15	**Equals: Net Income Available For Debt Service**		**$ 375,625**	**$ 530,079**	**$ 658,113**	**$ 801,541**	**$ 834,859**	**$ 869,255**	**$ 907,390**	**$ 944,731**	**$ 979,585**	**$ 1,017,920**	**$ 1,056,411**
	Senior Lien Debt Service Coverage Test												
16	Net Income Available for Senior-Lien Debt Service		**$ 375,625**	**$ 530,079**	**$ 658,113**	**$ 801,541**	**$ 834,859**	**$ 869,255**	**$ 907,390**	**$ 944,731**	**$ 979,585**	**$ 1,017,920**	**$ 1,056,411**
17	Cumulative New Senior Lien Debt Service (calculated)		-	206,863	299,073	299,073	374,729	397,503	397,503	442,809	456,447	456,447	531,224
18	**Total Annual Senior-Lien Debt Service**	**Targ.**	**$ -**	**$ 206,863**	**$ 299,073**	**$ 299,073**	**$ 374,729**	**$ 397,503**	**$ 397,503**	**$ 442,809**	**$ 456,447**	**$ 456,447**	**$ 531,224**
19	*Calculated Senior-Lien Debt Service Coverage*	**1.50**	**-**	**2.56**	**2.20**	**2.68**	**2.23**	**2.19**	**2.28**	**2.13**	**2.15**	**2.23**	**1.99**
	Cash Flow Test												
20	Net Income Available For Debt Service		$ 375,625	$ 530,079	$ 658,113	$ 801,541	$ 834,859	$ 869,255	$ 907,390	$ 944,731	$ 979,585	$ 1,017,920	$ 1,056,411
21	Less: Non-Operating Expenditures												
22	Net Debt Service Payment		-	(206,863)	(299,073)	(299,073)	(374,729)	(397,503)	(397,503)	(442,809)	(456,447)	(456,447)	(531,224)
23	Capital Outlay		-	(193,750)	(193,750)	(193,750)	(193,750)	(193,750)	-	-	-	-	-
24	**Net Cash Flow**		**$ 375,625**	**$ 129,466**	**$ 165,290**	**$ 308,717**	**$ 266,381**	**$ 278,002**	**$ 509,887**	**$ 501,922**	**$ 523,138**	**$ 561,472**	**$ 525,187**
	Unrestricted Reserve Fund Test												
25	Balance At Beginning Of Fiscal Year		$ 792,574	$ 783,199	$ 405,859	$ 418,009	$ 430,568	$ 443,552	$ 456,975	$ 772,199	$ 485,204	$ 597,852	$ 515,391
26	Cash Flow Surplus/(Deficit)		375,625	129,466	165,290	308,717	266,381	278,002	509,887	501,922	523,138	561,472	525,187
27	Projects Designated To Be Paid With Cash		-	(206,635)	(70,040)	(72,141)	(74,305)	(76,535)	(78,831)	(81,196)	(83,631)	(86,140)	(88,725)
28	Projects Paid With Non Specified Funds		(385,000)	(300,171)	(83,100)	(224,017)	(179,091)	(188,044)	(115,832)	(707,722)	(326,859)	(557,793)	(420,590)
29	**Balance At End Of Fiscal Year**		**$ 783,199**	**$ 405,859**	**$ 418,009**	**$ 430,568**	**$ 443,552**	**$ 456,975**	**$ 772,199**	**$ 485,204**	**$ 597,852**	**$ 515,391**	**$ 531,263**
30	Minimum Working Capital Reserve Target		406,948	405,859	418,009	430,568	443,552	456,975	470,853	485,204	500,044	515,391	531,263
31	**Excess/(Deficiency) Of Working Capital To Target**		**$ 376,251**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 301,346**	**$ -**	**$ 97,808**	**$ -**	**$ -**

Capital Project Funding Summary

Schedule 9

Final Capital Projects Funding Sources	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue Fund	$ 385,000	$ 300,171	$ 83,100	$ 224,017	$ 179,091	$ 188,044	$ 115,832	$ 707,722	$ 326,859	$ 557,793	$ 420,590
Senior-Lien Debt Proceeds	-	2,527,074	2,088,672	153,334	75,967	1,308,447	-	829,054	-	708,561	659,774
Projects Designated To Be Paid With Cash	-	206,635	70,040	72,141	74,305	76,535	78,831	81,196	83,631	86,140	88,725
Total Projects Paid	**$ 385,000**	**$ 3,033,880**	**$ 2,241,813**	**$ 449,492**	**$ 329,364**	**$ 1,573,026**	**$ 194,663**	**$ 1,617,971**	**$ 410,490**	**$ 1,352,494**	**$ 1,169,089**

Funding Summary by Fund

Schedule 10

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue Fund											
Balance At Beginning Of Fiscal Year	$ 792,574	$ 783,199	$ 405,859	$ 418,009	$ 430,568	$ 443,552	$ 456,975	$ 772,199	$ 485,204	$ 597,852	$ 515,391
Net Cash Flow	375,625	129,466	165,290	308,717	266,381	278,002	509,887	501,922	523,138	561,472	525,187
Less: Cash-Funded Capital Projects	-	(206,635)	(70,040)	(72,141)	(74,305)	(76,535)	(78,831)	(81,196)	(83,631)	(86,140)	(88,725)
Less: Payment Of Debt Service	-	-	-	-	-	-	-	-	-	-	-
Subtotal	$ 1,168,199	$ 706,030	$ 501,109	$ 654,585	$ 622,643	$ 645,019	$ 888,031	$ 1,192,926	$ 924,710	$ 1,073,183	$ 951,853
Less: Restricted Funds	(406,948)	(405,859)	(418,009)	(430,568)	(443,552)	(456,975)	(470,853)	(485,204)	(500,044)	(515,391)	(531,263)
Total Amount Available For Projects	761,251	300,171	83,100	224,017	179,091	188,044	417,178	707,722	424,666	557,793	420,590
Amount Paid For Projects	(385,000)	(300,171)	(83,100)	(224,017)	(179,091)	(188,044)	(115,832)	(707,722)	(326,859)	(557,793)	(420,590)
Subtotal	$ 376,251	$ -	$ -	$ -	$ -	$ -	$ 301,346	$ -	$ 97,808	$ -	$ -
Add Back: Restricted Funds	406,948	405,859	418,009	430,568	443,552	456,975	470,853	485,204	500,044	515,391	531,263
Plus: Interest Earnings	1,970	2,973	3,090	4,243	5,463	6,754	10,755	12,574	10,831	11,132	10,467
Less: Interest Allocated To Cash Flow	(1,970)	(2,973)	(3,090)	(4,243)	(5,463)	(6,754)	(10,755)	(12,574)	(10,831)	(11,132)	(10,467)
Balance At End Of Fiscal Year	**$ 783,199**	**$ 405,859**	**$ 418,009**	**$ 430,568**	**$ 443,552**	**$ 456,975**	**$ 772,199**	**$ 485,204**	**$ 597,852**	**$ 515,391**	**$ 531,263**
Restricted Reserves											
Balance At Beginning Of Fiscal Year	$ -	$ -	$ 299,821	$ 302,070	$ 305,090	$ 407,949	$ 414,068	$ 421,314	$ 489,274	$ 499,060	$ 509,041
Additional Funds:	-	-	-	-	-	-	-	-	-	-	-
Debt Service Reserve On New Debt	$0	$299,073	$0	$0	$98,430	$0	$0	$58,944	$0	$0	$97,287
Other Additional Funds	-	-	-	-	-	-	-	-	-	-	-
Subtotal	$ -	$ 299,073	$ 299,821	$ 302,070	$ 403,520	$ 407,949	$ 414,068	$ 480,259	$ 489,274	$ 499,060	$ 606,328
Plus: Interest Earnings	-	748	2,249	3,021	4,429	6,119	7,246	9,016	9,785	9,981	11,154
Less: Interest Allocated To Cash Flow	-	-	-	-	-	-	-	-	-	-	-
Balance At End Of Fiscal Year	**$ -**	**$ 299,821**	**$ 302,070**	**$ 305,090**	**$ 407,949**	**$ 414,068**	**$ 421,314**	**$ 489,274**	**$ 499,060**	**$ 509,041**	**$ 617,481**

Senior Lien Borrowing Projections

Schedule 11

			FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Term (Years)			30	30	30	30	30	30	30	30	30	30	30
Interest Rate			3.50%	4.00%	4.50%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Sources of Funds													
Par Amount			$ -	$ 5,171,585	$ -	$ -	$ 1,513,106	$ -	$ -	$ 906,121	$ -	$ -	$ 1,495,532
Uses of Funds													
Proceeds			$ -	$ 4,769,080	$ -	$ -	$ 1,384,414	$ -	$ -	$ 829,054	$ -	$ -	$ 1,368,335
Cost of Issuance	2.00%	of Par	-	103,432	-	-	30,262	-	-	18,122	-	-	29,911
Debt Service Reserve	1	Year(s) of Debt Service	-	299,073	-	-	98,430	-	-	58,944	-	-	97,287
Total Uses			$ -	$ 5,171,585	$ -	$ -	$ 1,513,106	$ -	$ -	$ 906,121	$ -	$ -	$ 1,495,532
1 Year Interest			-	206,863	-	-	75,655	-	-	45,306	-	-	74,777
Annual Debt Service			$ -	$ 299,073	$ -	$ -	$ 98,430	$ -	$ -	$ 58,944	$ -	$ -	$ 97,287
Total Debt Service			-	8,972,198	-	-	2,952,892	-	-	1,768,334	-	-	2,918,595
Cumulative New Annual Senior Lien Debt Service[1]			**$ -**	**$ 206,863**	**$ 299,073**	**$ 299,073**	**$ 374,729**	**$ 397,503**	**$ 397,503**	**$ 442,809**	**$ 456,447**	**$ 456,447**	**$ 531,224**

[1]Reflects interest-only payment due in year of issuance.