CITY OF KEY WEST

Utility Impact Fee Update

FINAL REPORT / February 12, 2024

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1. Introduction

1.1. Purpose and Scope

The purpose of this impact fee evaluation was to calculate updated maximum supportable cost justified sanitary sewer, solid waste, and stormwater utility impact fees allowing the City of Key West ("City") to recover the upfront cost of past infrastructure investments equitably and to provide funds to offset the cost of future capital projects. The City currently assesses sanitary sewer and solid waste impact fees to new development within the City. The existing fees have been in effect since 1986. It does not currently assess a stormwater impact fee.

The purpose of this report is to document the calculated impact fees, the methodology used, the information relied on, and to summarize the calculations that were completed to prepare the maximum supportable cost justified fees for each system. The report also provides a brief review of the legal requirements at the state level for impact fees assessed within the State of Florida and discusses possible fee implementation options availability to the City based on the calculated results and state legislation.

1.2. Legal Requirements

1.2.1. State Legislation

Impact fee legislation at the state level is included within the State of Florida's Impact Fee Act ("the Act"), which contains rules and requirements to be followed by local governments that have adopted and currently assess impact fees. The provisions of the Act are included under Section 163.31801 of the Florida Statutes.

The Act does not include specific guidance for how impact fees should be calculated; therefore, no specific requirements for impact fee calculations from the Act were incorporated into the updated fee calculations. However, it does contain several general requirements to be followed by municipalities. These requirements are included in Paragraph 4 of the Act and are as follows:

> *(4) At a minimum, each local government that adopts and collects an impact fee by ordinance and each special district that adopts, collects, and administers an impact fee by resolution must:*
>
> *(a) Ensure that the calculation of the impact fee is based on the most recent and localized data.*
>
> *(b) Provide for accounting and reporting of impact fee collections and expenditures and account for the revenues and expenditures of such impact fee in a separate accounting fund.*
>
> *(c) Limit administrative charges for the collection of impact fees to actual costs.*
>
> *(d) Provide notice at least 90 days before the effective date of an ordinance or resolution imposing a new or increased impact fee. A local government is not required to wait 90 days to decrease, suspend, or eliminate an impact fee. Unless the result is to reduce the total mitigation costs or impact fees imposed on an applicant, new or increased impact fees may not apply to current or pending permit applications submitted before the effective date of a new or increased impact fee.*
>
> *(e) Ensure that collection of the impact fee may not be required to occur earlier than the date of issuance of the building permit for the property that is subject to the fee.*
>
> *(f) Ensure that the impact fee is proportional and reasonably connected to, or has a rational nexus with, the need for additional capital facilities and the increased impact generated by the new residential or commercial construction.*

(g) Ensure that the impact fee is proportional and reasonably connected to, or has a rational nexus with, the expenditures of the funds collected and the benefits accruing to the new residential or nonresidential construction.

(h) Specifically earmark funds collected under the impact fee for use in acquiring, constructing, or improving capital facilities to benefit new users.

(i) Ensure that revenues generated by the impact fee are not used, in whole or in part, to pay existing debt or for previously approved projects unless the expenditure is reasonably connected to, or has a rational nexus with, the increased impact generated by the new residential or nonresidential construction.

The Act also contains provisions limiting the extent to, and the frequency with which, impact fees can be increased. However, specific language is included allowing a municipality to implement a fee increase beyond those authorized by the Act, provided it meets certain requirements. For example, Paragraph 6 of the Act states:

(6) A local government, school district, or special district may increase an impact fee only as provided in this subsection

(a) An impact fee may be increased only pursuant to a plan for the imposition, collection, and use of the increased impact fees which complies with this section.

(b) An increase to a current impact fee rate of not more than 25 percent of the current rate must be implemented in two equal annual increments beginning with the date on which the increased fee is adopted.

(c) An increase to a current impact fee rate which exceeds 25 percent but is not more than 50 percent of the current rate must be implemented in four equal installments beginning with the date the increased fee is adopted.

(d) An impact fee increase may not exceed 50 percent of the current impact fee rate.

(e) An impact fee may not be increased more than once every 4 years.

(f) An impact fee may not be increased retroactively for a previous or current fiscal or calendar year.

(g) A local government, school district, or special district may increase an impact fee rate beyond the phase-in limitations established under paragraph (b), paragraph (c), paragraph (d), or paragraph (e) by establishing the need for such increase in full compliance with the requirements of subsection (4), provided the following criteria are met:

1.A demonstrated-need study justifying any increase in excess of those authorized in paragraph (b), paragraph (c), paragraph (d), or paragraph (e) has been completed within the 12 months before the adoption of the impact fee increase and expressly demonstrates the extraordinary circumstances necessitating the need to exceed the phase-in limitations.

2.The local government jurisdiction has held not less than two publicly noticed workshops dedicated to the extraordinary circumstances necessitating the need to exceed the phase-in limitations set forth in paragraph (b), paragraph (c), paragraph (d), or paragraph (e).

3.The impact fee increase ordinance is approved by at least a two-thirds vote of the governing body.

(h) This subsection operates retroactively to January 1, 2021.

1.2.2. City Municipal Code Impact Fee Provisions

Article III of the City's municipal code includes various requirements related to the administration of its existing impact fees. For example, the code includes provisions related to when fees shall be assessed and are required to be paid, permitted uses of collected fees, and how and when unexpended or unencumbered funds should be returned to fee payers. Note that none of the provisions within Article III included general guidance or specific requirements for how the City's impact fees should be calculated; therefore, no specific requirements for impact fee calculations from the City code were incorporated into the updated fee calculations.

2. Existing Impact Fees

The City currently assesses impact fees for sanitary sewer, solid waste, local roads, and public libraries. Only new residential development is assessed an impact fee for library facilities. The scope of the updated fee calculations included in this report were limited to the City's sanitary sewer and solid waste impact fees, and a potential new stormwater impact fee.

The City's existing (fiscal year 2023) impact fees for sanitary sewer and solid waste are shown in Table 2-1. As shown in the table, the existing fees are scaled among various categories of demand as designated by property type, which includes residential, hotel/motel, restaurant, retail, office, bar and lounge, marina, and theater developments. To account for varying levels of demand within a property type, the fees are assessed according to an impact unit. The impact unit for new residential development is a bedroom or a dwelling and a bedroom, while the impact units for other property types include bedrooms (hotel/motel), seats (restaurant, bar and lounge, and theater), gross square footage (retail and office), and a boat slip (marina).

Table 2-1. Existing (FY 2023) Sanitary Sewer and Solid Waste Impact Fees

Property Type	Sanitary Sewer	Solid Waste
Residential	$300 per bedroom	$215 per dwelling + $43 per bedroom
Hotel / Motel[1]	$200 per bedroom	$129 per bedroom
Restaurant[2]	$100 per seat	$172 per seat
Retail	$0.20 per gross SF	$0.86 per gross SF
Office	$0.20 per gross SF	$0.43 per gross SF
Bars and Lounges[3]	$60 per seat	$86 per seat
Theater	$10 per seat	$43 per seat
Marina	$50 per slip	$43 per slip

Note: The City does not currently assess a stormwater impact fee.

[1] There is a two bed maximum per bedroom.

[2] One seat is equivalent to 15 square feet of gross seating area.

[3] Assumes no food service within the establishment.

3. Methodology

3.1. Common Industry Approaches

Impact fees are one-time fees charged to new development wishing to connect to, and/or receive service from, a utility system. The purpose of these fees is to provide greater equity between new and existing customers by recovering a portion of the upfront capital cost of the system's backbone infrastructure from new customers. Backbone infrastructure generally includes assets put in place to meet the capacity needs of the system. For example, backbone infrastructure within a sanitary sewer system includes collection, conveyance, and pumping facilities, as well as the structure and major internal components of a wastewater treatment plant. The capacity providing infrastructure of a solid waste system often includes the transfer station and its major internal components, while for a stormwater management system, includes gravity wells, injection wells, culverts, dedicated stormwater pipes, stormwater drains, and other infrastructure installed to manage stormwater runoff.

In general, utility impact fees are calculated under three main approaches. Each approach is described in more detail in the following paragraphs.

Capacity Buy-In Approach:

Under the capacity buy-in method, fees are calculated based on the proportional cost of each user's share of existing system capacity. This approach is typically used when existing system facilities provide adequate capacity to accommodate the capacity demands of new customers. The cost of capacity is derived by dividing the value of existing facilities by the current capacity provided by the facilities. Certain adjustments to the value of existing facilities are made for developer contributed assets, grant funds, and outstanding debt.

Incremental Cost Approach:

Under the incremental cost (or marginal cost) method, fees are calculated based on a new customer's proportional share of the incremental future cost of system capacity. This approach is typically used when existing facilities have limited, or no capacity to accommodate future growth. The cost of capacity is calculated by dividing the total cost of growth-related capital investments over a period of time in the future by the additional capacity provided by the investments.

Combined Approach:

Under the combined method, fees are calculated based on the combined value of both the existing and expanded system capacity. As such, this approach is a combination of the capacity buy-in and incremental cost methods and is typically used when existing facilities provide adequate capacity to accommodate a portion of the capacity needs of new customers, but where significant investment in new facilities is needed to provide the necessary capacity for future growth. It may also be used when some parts of the existing system can accommodate the capacity demands of new customers, but incremental capacity will be needed in other parts to serve new customers.

The capacity buy-in approach was used to calculate updated sanitary sewer, solid waste, and stormwater impact fees for the City. This approach was selected based on a review of the existing capacity that each system provides as compared to the amount being used by existing customers, along with consideration to the amount of capacity that would be required to serve near-term future growth within the City. Based on this

review, we concluded that the sanitary sewer and solid waste systems currently have enough existing capacity to serve their existing customer bases and to serve potential new development in the future.

3.2. System Facilities Included in the Fee Calculation

The Florida Impact Fee Act does not provide explicit requirements for what types of facilities can and cannot be included in the calculation of impact fees; however, it does provide a detailed definition of the term 'infrastructure' to mean, "…*a fixed capital expenditure or fixed capital outlay, excluding the cost of repairs or maintenance, associated with the construction, reconstruction, or improvement of public facilities that have a life expectancy of at least 5 years; related land acquisition, land improvement, design, engineering, and permitting costs; and other related construction costs required to bring the public facility into service."*

Without specific guidance from the Act as to the types of facilities that can be included in impact fee calculations, the approach used as part of this analysis defaulted to common industry practice, which recognizes that, in general, facilities that directly contribute to the system's ability to provide its current level of capacity shall be included as part of the calculation of impact fees, provided the facilities represent a newly constructed facility, the replacement of an existing facility, or an upgrade or improvement to an existing capacity providing asset.[1] [2] Facilities within the sanitary sewer, solid waste, and stormwater systems satisfying this definition are referred to in this report as 'qualifying facilities or assets' and were included in the calculation of updated maximum cost justified impact fees.

3.3. Steps Completed to Calculate Updated Fees

The following steps were completed to calculate updated maximum cost justified impact fees for the City's sanitary sewer, solid waste, and stormwater management systems based on the industry accepted practices and methodologies for the buy in approach:

1. The utility system assets, whose costs could be recovered through impact fees (i.e., qualifying assets), were identified on each system's listing of assets currently in service. The reproduction value less depreciation ("RCNLD") of qualifying assets was then estimated. The reproduction value and the associated depreciation were estimated using a relevant cost index. If necessary, adjustments were made for contributed assets, grant funded assets, and the portion of qualifying assets funded by currently outstanding debt to derive the net value of qualifying assets for each system.
2. The unit cost of system capacity was estimated by dividing the net system value of existing facilities by the current capacity provided by the system.
3. For the sanitary sewer and stormwater utility systems, the amount of capacity demanded by one service unit of new development was estimated. One service unit of new development represented the smallest service unit of new development that could be connected to or receive service from these systems. This was assumed to represent one equivalent residential dwelling unit ("EDU"). For the solid waste system, individual demand categories were identified based on property type.
4. For sanitary sewer and stormwater, the impact fee for one service unit of new development was calculated by multiplying the cost per unit of system capacity by the capacity demanded by one EDU.

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[1] Improvements to facilities that are regarded as repairs and maintenance, while normally recognized as an expense in the period incurred rather than capitalized and depreciated, are not typically included as part of impact fee calculations.

[2] Chapter VII.2 – System Development Charges, Principles of Water Rates, Fees, and Charges, 7th Edition, American Water Works Association.

For solid waste, the unit cost of capacity was multiplied by the capacity demands estimated for each property type.

5. The calculated impact fees for one EDU were scaled to reflect the categories of demand for the sanitary sewer system. For example, customers with the same meter size were assumed to place the same or similar capacity demands on the system; therefore, categories of demand within the sanitary sewer system were represented by water meter dimeter. For the solid waste system, categories of demand were segregated by property type. Categories of demand were not defined for the stormwater system. Instead, the cost per square foot ("SF") of impervious area ("IA") was calculated at the current level of stormwater management service provided. The impact fee would then be assessed based on the fee per SF of IA and the SF of IA estimated to be associated with the new development.

The calculations completed under each of these steps and the resulting maximum cost justified impact fees for the sanitary sewer, solid waste, and stormwater systems are documented separately in the following sections of this report.

4. Sanitary Sewer

This section documents the steps completed and the calculations performed to prepare the updated maximum cost justified sanitary sewer impact fees using the capacity buy-in approach. The City currently assesses sanitary sewer impact fees to new development connecting to its sanitary sewer system. For new residential development, the fees are assessed based on the number of bedrooms, while for new non-residential development, the fees are assessed based on the number of bedrooms (hotel/motel) the number of seats (restaurant, bar and lounge, and theater), gross square feet (office and retail), and boat slips (marina). The maximum calculated cost justified fees were compared to other sewer impact fees assessed throughout the U.S. and the State of Florida at the end of this report section.

4.1. Fee Calculation

Step 1. Estimate the value of qualifying system facilities and apply adjustments.

The City provided a listing of individual sewer system assets known to be in service as of fiscal year ("FY") 2022. Each individual asset was reviewed based on its description and categorization under sub-headings within the listing to determine if the asset should be included in the fee calculation. Note that assets included in the fee calculation were those that were able to be clearly identified as being capacity-providing backbone infrastructure assets, which were those associated with the collection, pumping, treatment, and disposal functions of the system.

Next, the RCNLD value of qualifying assets included in the fee calculation was estimated. For the calculation of RCNLD value, the original cost of each asset was escalated to current year (2023) dollars based on the year the asset was acquired and placed in service, and the corresponding escalation factor for that year. The reproduction values of each asset were adjusted by their indexed accumulated depreciation to derive the RCNLD amounts. Escalation factors for each year were developed using the Engineering News Record's Construction Cost Index ("ENR CCI"), which provides an annual index value representing the relative change in construction related costs for each year from 1908 through 2023 (as of September 2023). Using the ENR's CCI to estimate an asset's RCNLD is an industry-accepted method by which to value system facilities. Note that for conservativeness, when identifiable, land was included at its original cost in the fee calculation.

The RCNLD value of the sanitary sewer system's qualifying assets are shown by qualifying asset category in Table 4-1. As shown in the table, system value under the RCNLD method was $154.6 million.

Table 4-1. Summary of Qualifying Sanitary Sewer Facility Values - RCNLD

Description	Amount
Land	$6,480
AWTF Buildings / Structures	0
Pump Station Buildings / Structures	1,135,525
AWTF Improvements	16,985,175
AWTF Major Equipment	825,803
Injection Wells	9,285,634
Pump Station Improvements	2,423,694
Pump Station Major Equipment	5,644,906
Sewer Mains	118,295,553
Total	**$154,602,771**

Two adjustments were made to the RCNLD value in Table 4-1. The first was for grant funded assets and the second was for outstanding debt used to finance the facilities included in the calculation. No adjustment was made for contributed assets, as the City reported that the value of assets that were contributed by private entities was insignificant.

Grant Funded Assets:

The City reported that it has obtained grant funding to pay for all or a portion of several qualifying sanitary sewer assets. These assets were identified as being related to repairs at the Fleming Key pipe bridge, structural repairs at the advanced wastewater treatment plant ("AWTP"), the installation of variable speed motors at lift stations, lift and pump station rehabilitation work, and the installation of aeration equipment at the AWTP. The RCNLD value of the assets funded with grant monies was approximately $5.7 million and this amount was subtracted from the RCNLD value of qualifying assets, as assets that were funded with federal, state, or local grants do not represent an investment in system capacity by the City.[3]

Outstanding Debt:

An adjustment for outstanding debt was made to the RCNLD value of qualifying assets to reflect that a portion of the City's past investment in system capacity was financed with debt that may be repaid with future revenues from its sewer user rates and charges (e.g., the Base Charge per EDU and the volumetric rate). This adjustment prevents charging customers twice for the recoverable cost of the capacity-providing asset, once when paying the impact fee, and then again when paying user rates and charges to fund the repayment of the debt principal. In addition, the City has confirmed that it does not use impact fee revenues to repay existing debt; therefore, the full amount of the outstanding debt principal was included in the fee calculation as a credit.

The outstanding debt of the City's sanitary sewer system was comprised of one refunding revenue bond issue. While this issue was used to refund a prior issue of revenue bonds, it has been assumed that the previous bonds were used to fund the acquisition of qualifying infrastructure assets; therefore, the outstanding principal

[3] The RCNLD value of assets funded with grant monies was estimated based on the amount of grant funding received, the year grant funding was received or the year the asset was assumed to be placed in service, the estimated useful life of those assets, and the relevant cost escalation factor for the year the asset was assumed to be placed in service, using the ENR CCI.

associated with this debt, which was approximately $8.4 million as of FY 2022, was subtracted from the RCNLD value of qualifying assets.

The resulting adjustments to the RCNLD value to account for grant funded assets and outstanding debt are shown in Table 4-2. As shown in the table, the net adjusted RCNLD value of qualifying sanitary sewer system assets was calculated to be approximately $140.5 million.

Table 4-2. Net Adjusted RCNLD Value of Qualifying Sanitary Sewer Assets

Description	Amount
RCNLD Value	$154,602,771
Less: Adjustment for Grant Funded Assets	-5,719,055
Less: Adjustment for Outstanding Debt	-8,371,529
Net Adjusted RCNLD Value	**$140,512,186**

Step 2. Calculate the unit cost of system capacity.

The cost per unit of system capacity was calculated by dividing the net adjusted RCNLD value of qualifying assets (estimated in Step 1, Table 4-2) by the design capacity of the City's AWTP. The permitted capacity of AWTP is 10.0 million gallons per day ("MGD").[4] Therefore, the cost per unit of system capacity was calculated to be $14.05 per gallon per day ($140,512,186 ÷ 10.0 MGD).

Step 3. Estimate the amount of capacity demanded by one service unit of new development.

The smallest service unit of new development was defined as one EDU, which represents the assumed average day volume of wastewater discharged by a typical residential dwelling unit within the City.

Therefore, the capacity demanded by one EDU was estimated by completing the following steps:

1. Identify the average estimated annual volume of wastewater contributed by all customers of the system over the last three fiscal years as measured by metered water consumption.
2. Identify the average annual volume of all wastewater received at the City's AWTP over the last three fiscal years.
3. Compare the volume from Step 1 to the volume from Step 2 to calculate the percentage of flows received at the AWTP attributable to inflow and infiltration ("I&I").
    a. Average estimated annual volume of wastewater discharged by all customers of 967,743,985 gallons and average annual flows received at AWTP of 1,527,328,951 gallons = 36.6% of flows attributable to I&I.
4. Identify the average annual volume of wastewater discharged by residential customers over the last three fiscal years.

[4] Section B on p. 4 of 19 of the State of Florida Domestic Wastewater Facility Report for the City of Key West permit # FLA147222, effective date 1/23/19 to 1/22/24, provided by the Florida Department of Environmental Protection.

5. Adjust the average annual volume from Step 4 by the percentage of flows received at the AWTP attributable to I&I (calculated in Step 3) to estimate the volume of flows received at the AWTP, attributable to residential customers and inclusive of I&I.
    a. Average estimated annual residential volume of wastewater discharged of 510,907,197 gallons and 36.6% of total received flows attributable to I&I = a total estimated residential flow contribution of 806,404,101 gallons per year.
6. Divide the volume from Step 5 by the number of residential dwelling units in the most recent fiscal year that data is available to calculate the annual flows contributed per dwelling unit.
    a. Total estimated annual residential flow contribution of 806,404,101 gallons ÷ 12,718 dwelling units = 63,406.52 gallons per year.
7. Divide the total from Step 6 by 365 to calculate the daily capacity used by one EDU.
    a. Estimated residential flow contribution per day per dwelling unit 63,406.52 ÷ 365 days = 173.72 gallons per day.

As shown in the calculation steps, on an average day basis, residential customers contribute roughly 174 gallons of wastewater, inclusive of I&I, to the City's AWTP.

Step 4. Calculate the impact fee per unit of new development.

The sanitary sewer impact fee for one EDU, or the base unit of demand, was calculated by multiplying the unit cost of capacity from Step 2 by the capacity demand associated with one unit of new development from Step 3. This calculation is shown in Table 4-3.

Table 4-3. Impact Fee per Unit of New Development

Description	Amount
Unit Cost of Capacity ($ per GPD)	$14.05
Capacity Demanded by the Base Unit (GPD)	173.7
Impact Fee per Unit of New Development	**$2,440.93**

Step 5. Scale the impact fee among the various categories of demand.

The fee calculated in Step 4 was scaled to reflect that impact fees recover a new customer's share of upfront capacity-related costs and that some new customers have the potential to place a greater capacity demand on the system than a typical residential customer. The relative capacity demands a new customer could place on the system were estimated based on their maximum instantaneous water demand, which is limited based on the size and type of the water meter.

As a result, the impact fees were then scaled for each category of demand using maximum rated meter capacities. These ratios were developed using the maximum normal operating flow rates referenced on manufacturer specification sheets for the meter types and sizes commonly installed by the Florida Keys Aqueduct Authority ("FKAA"), which is the local water provider serving the City, as reported by FKAA. The meter capacities and resulting scaling factors for each meter type and size are shown in Table 4-4.

Note that the City's current approach to scaling its sanitary sewer impact fees involves estimating the amount of capacity demanded on a per impact unit basis, based on property type. Scaling the impact fee based on water meter capacity ratios offers the following advantages:

1. It uses up-to-date and reliable information.
    a. The maximum operating capacities are sourced from published manufacturer specification sheets for each water meter size and type. While information on per capita indoor water use is available from current and reliable sources, water use on a per transient room, per seat, per square foot, or per slip basis for restaurants, bars and lounges, retail properties, office buildings, and marinas is more difficult to obtain or may not be current and, in turn, may be less reliable.
2. It allows for differing capacity demands to be reflected within the same property use.
    a. For example, some restaurants may place a higher capacity demand on the system (and thus require a larger water meter) than another restaurant with the same number of seats. Similarly, one office building may discharge more wastewater than another that is the same size based on the intended use of that building. Using water meter size to estimate relative capacity demands would reflect these types of situations, while assuming the same level of demand on a per impact unit basis within a property type may not.
3. It reduces the need to assess additional fees if/when the property changes use.
    a. Assessing the fees based on property use means that additional impact fees should be assessed by the City if the new use of the existing property results in a higher estimated capacity demand. Associating the fees with meter size will result in less administrative burden, as an additional fee will only need to be assessed if the meter is upsized as part of a redevelopment project. The City has indicated that, while it is not unusual for a property's use to change as part of a redevelopment project, the need for the water meter to be upsized as part of a redevelopment occurs far less frequently.

In addition, it is common within the industry for water and sewer utilities to reflect varying levels of capacity demand among new customers by scaling their impact fees according to the customer's water meter size and the estimated relative capacity demands among the meters.

Table 4-4. Safe Maximum Operating Capacities and Demand Scaling Factors by Meter Type / Size

Meter Size	Meter Type	Max Flow Rate (GPM)	Calculated Demand Scaling Factor
5/8" – T-10	Displacement	20	1.0
5/8" – Mach 10	Ultrasonic	25	1.3
3/4" – T-10	Displacement	30	1.5
3/4" – Mach 10	Ultrasonic	35	1.8
1" – T-10	Displacement	50	2.5
1" – Mach 10	Ultrasonic	55	2.8
1-1/2" – T-10	Displacement	100	5.0
1-1/2" – Mach 10	Ultrasonic	125	6.3
2" – T-10	Displacement	160	8.0
2" – Mach 10	Ultrasonic	160	8.0
3" – Mach 10	Ultrasonic	500	25.0
4" – Mach 10	Ultrasonic	1,250	62.5
6" – Mach 10	Ultrasonic	2,000	100.0
8" – Mach 10	Ultrasonic	4,000	200.0

GPM = gallons per minute.

The sanitary sewer impact fees for each category of demand, as represented by the various water meter types and sizes, were calculated by multiplying the fee for one EDU, or the base unit of demand, by the calculated demand scaling factors shown in Table 4-4. The resulting maximum cost justified impact fees for each meter size are shown in Table 4-5. Note that one unit of new development, or one EDU, was assumed to be equivalent to the average day demand for a typical residential customer. The typical residential customer served by the City uses a 5/8-inch T-10 displacement meter; therefore, the impact fee for a customer using a 5/8-inch T-10 displacement meter was the same as the fee calculated for one EDU.

Table 4-5. Maximum Cost Justified Sanitary Sewer Impact Fees by Water Meter Size

Meter Size and Type	Calculated Fee
5/8" – T-10	$2,441
5/8" – Mach 10	$3,051
3/4" – T-10	$3,661
3/4" – Mach 10	$4,272

1" – T-10	$6,102
1" – Mach 10	$6,713
1-1/2" – T-10	$12,205
1-1/2" – Mach 10	$15,256
2" – T-10	$19,527
2" – Mach 10	$19,527
3" – Mach 10	$61,023
4" – Mach 10	$152,558
6" – Mach 10	$244,093
8" – Mach 10	$488,186

4.2. National and State of Florida Fee Comparison

The calculated maximum supportable cost justified fees under the RCNLD valuation method were compared to national and State of Florida averages for sanitary sewer impact fees.[5] The comparison results are shown in Figure 4-1. As shown in the figure, the national averages were higher than the calculated fees for all three property types, while the State of Florida average was more comparable, but lower.[6] For example, while the statewide average for the residential fee was comparable to the calculated residential fee, the national average was $3,896 per dwelling unit, which was $1,455 higher than the City's maximum supportable cost justified single-family residential fee shown in the comparison. Possible reasons for this difference are as follows:

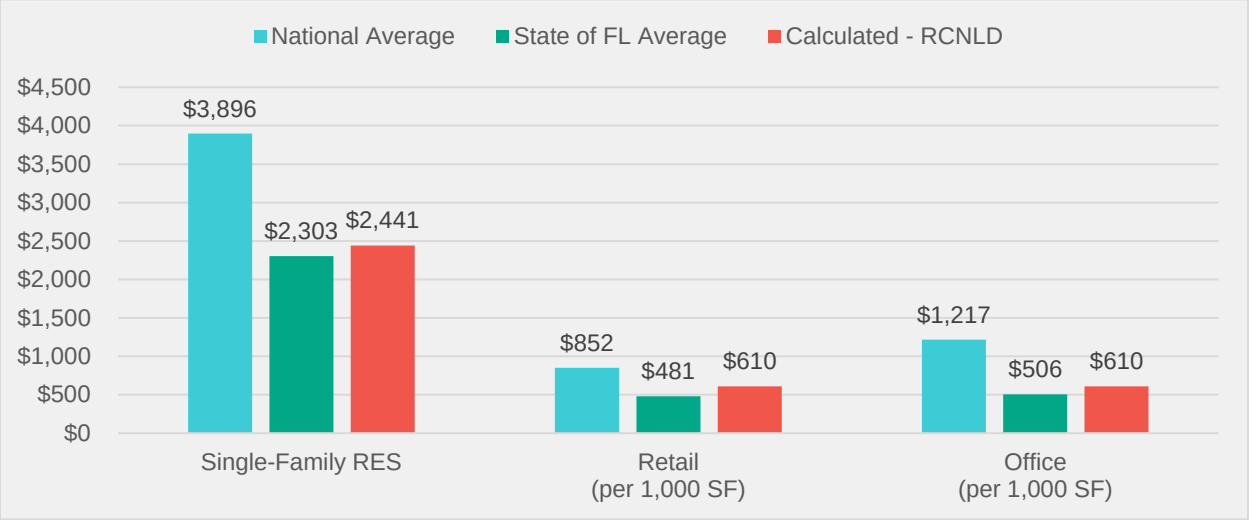
1. The City's system and the sanitary sewer systems throughout the state of Florida may be older than, and have depreciated more, than systems in other parts of the country.
2. The average number of persons per household appears be less in the City than on average across the U.S., resulting in a lower capacity demand for a typical residential customer than in other parts of the country.[7]
3. A large portion of residential customers in the City are not full-time residents. This proportion may be larger as compared to other parts of the country. If true, then the average day demand of one EDU, which was estimated based on annual water use and estimated wastewater flows and used to calculate the fee, would be less than if there were a higher percentage of year-round residents.

[5] 2019 National Impact Fee Survey, published by Duncan and Associates.

[6] National and state averages for single family, retail and office assumed a 3-bedroom home using a 5/8-inch water meter, 100,000 SF shopping center with a 3-inch meter, and a 100,000 SF general office building with a 3-inch meter, respectively. These same assumptions were applied to provide Calculated – RCNLD for these property types.

[7] American Community Survey, 2021: ACS 5-Year Estimates for Selected Housing Characteristics (Table DP04) for the U.S., State of Florida, and the City of Key West.

Figure 4-1. Sanitary Sewer Impact Fee Comparison



Source: National average and State of FL average obtained from Duncan and Associates 2019 National Impact Fee Survey.

Note: National and state averages for single family, retail and office assumed a 3-bedroom home using a 5/8-inch water meter, 100,000 SF shopping center with a 3-inch meter, and a 100,000 SF general office building with a 3-inch meter, respectively. These same assumptions were applied to provide Calculated – RCNLD for these property types.

5. Solid Waste

5.1. Fee Calculation

This section documents the steps completed and the calculations performed to prepare the updated maximum cost justified solid waste impact fees using the capacity buy-in approach. The City currently assesses solid waste impact fees to new development served by the City's solid waste transfer station. For new residential development, the fees are assessed based on the number of housing units (one dwelling unit equals one housing unit) plus the number of bedrooms, while for new non-residential development, the fees are assessed based on the number of bedrooms (hotel/motel), number of seats (restaurant, bar and lounge, and theater), gross square feet (office and retail), and boat slips (marina).

Step 1. Estimate the value of qualifying system facilities and apply adjustments.

The City provided a listing of individual solid waste system assets known to be in service as of the end of FY 2022. Each individual asset was reviewed based on its description and categorization under sub-headings within the listing to determine if the asset should be included in the fee calculation. The assets included in the fee calculation were those that were clearly identified as being capacity-providing backbone infrastructure assets, which for the City's solid waste system, were recognized to be the land, building, and structures associated with the transfer station.

Next, the RCNLD values of qualifying assets included in the fee calculation were estimated. For the calculation of RCNLD values, the original cost of each asset was escalated to current year (2023) dollars based on the year the asset was acquired and placed in service, and the corresponding escalation factor for that year. The reproduction value of each asset was adjusted by its indexed accumulated depreciation to derive the RCNLD amount. Escalation factors for each year were developed using the ENR CCI. Note that for conservativeness, when identifiable, land was included at its original cost in the fee calculation.

The RCNLD values of the solid waste system's qualifying assets are shown by category in Table 5-1. As shown in the table, the total system value under the RCNLD method was $8.2 million.

Table 5-1. Summary of Qualifying Solid Waste Facility Values - RCNLD

Description	Amount
Transfer Station Land	$3,745,027
Transfer Station Building / Structure	4,484,989
Total	**$8,230,016**

No adjustments were made to the RCNLD total in Table 5-1, as no portion of the transfer station was contributed by private builders/developers and no portion was funded with grant monies received by the City. Furthermore, there was no outstanding debt associated with the solid waste system as of FY 2022.

Step 2. Calculate the unit cost of system capacity.

The cost per unit of system capacity was calculated by dividing the total RCNLD value of qualifying assets (estimated in Step 1) by the capacity of the City's transfer station, which is capable of processing 350 tons of solid waste per day.[8] Therefore, the cost per unit of capacity was calculated to be $11.76 per pound per day ($8,230,016 ÷ 350 tons).

Step 3. Identify the various categories of demand and the impact unit associated with each category.

The various categories of demand were identified based on property use and the type of new development most commonly occurring within the City, which was anticipated to include the following:

- Residential dwelling units (single and multifamily units)
- Hotel / motel
- Office
- Retail
- Restaurant
- Bar / Lounge
- Theater
- Marina

The amount of solid waste generated by new development under the same property type can vary; therefore, each property type was associated with an impact unit. The impact unit for each property type represents a common unit of demand for that development type. The impact unit selected for residential dwellings was a housing unit, the impact unit selected for a hotel / motel was a bedroom, the impact unit of office and retail buildings was a gross square foot of building area, and for a restaurant, a bar or lounge, and a theater, the impact unit was a customer seat, while for a marina, the impact unit was a boat slip.

Step 4. Estimate the amount of capacity demanded per impact unit for each category of demand / property use.

Residential:

Residential customers arrange directly with the City to initiate solid waste service. The City contracts with Waste Management, Inc. to collect solid waste from residential customers and transport it to the City's transfer station. Collection service is provided once per week; therefore, the capacity used by a residential dwelling should represent the amount of solid waste generated by the household over the course of one week. The City reported that a typical residential customer produces about 1.4 tons, or 2,800 pounds, of solid waste, including yard waste and recyclables, per year. This translates to about 53.7 pounds of solid waste per week, to be collected and transported to the transfer station as part of Waste Management's weekly pick-up.

The latest American Community Survey ("ACS") data from the U.S. Census Bureau was reviewed to determine the extent to which a multifamily dwelling unit would produce less solid waste than a single-family dwelling unit based on a comparison of persons per household.[9] Owner-occupied dwelling units were assumed to represent single-family dwellings, while renter-occupied dwelling units were assumed to represent multifamily units within the ACS data. The data showed that the average household size of an owner-occupied dwelling unit in the City was 2.31 persons, while the average household size of a renter-occupied

[8] Solid Waste Master Plan: Establishing a Pathway to Zero Waste, prepared by Kessler Consulting, Inc. for the City of Key West, August 2012, p. 24.

[9] American Community Survey, 2021: ACS 5-Year Estimates for Selected Housing Characteristics (Table DP04) for the City of Key West.

dwelling unit in the City was 2.34 persons. Based on this comparison, it was determined that the amount of solid waste produced by a single-family dwelling unit was comparable to the amount of solid waste produced by a multifamily dwelling unit and that no adjustment to a multifamily impact fee relative to the single-family impact fee would be needed.

Non-Residential:

The Florida Department of Environmental Protection's ("DEP") Solid Waste Management and Resource Recovery Technical Assistance Handbook was referenced to estimate the amount of solid waste generated per impact unit for hotels / motels, office buildings, retail establishments, and restaurants.[10] The amount of solid waste generated by bars and lounges and theaters was estimated based on discussions with the City and the estimated amount of solid waste generated by similar property types as included in the DEP's handbook. The amount of solid waste generated by marinas was estimated as a percentage (35 percent) of the waste generated by a dwelling unit.

Non-residential customers in the City are required to arrange with Waste Management, Inc. to initiate solid waste service. Collection service is provided up to seven times per week, depending on the container and the needs of the customer; therefore, the portion of the transfer station's daily capacity that is used by a non-residential customer represents the days of solid waste generated by that customer in between pickups (7 days if 1x per week pick-up, 4 days if 2x per week pick-up, etc.).

Each property use's impact unit, estimated daily solid waste generated per impact unit, assumed maximum number of days of solid waste included in a pick-up, and the estimated amount of solid waste contributed to the transfer station as part of a routine pick-up are shown in Table 5-2.

Table 5-2. Estimated Solid Waste Generated per Impact Unit by New Development

Property Type	Impact Unit	Daily Solid Waste per Impact Unit	Max Days per Pick-Up Cycle	Solid Waste per Pick-Up
RES – Single-Family	Dwelling unit	7.7 pounds	7 days (1x per week)	53.7 pounds
RES – Multifamily	Dwelling unit	7.7 pounds	7 days (1x per week)	53.7 pounds
Hotel / Motel	Room	2.0 pounds	4 days (2x per week)	8.0 pounds
Office	100 SF of floor area	1.0 pounds	4 days (2x per week)	4.0 pounds
Retail	100 SF of floor area	6.5 pounds	4 days (2x per week)	26.0 pounds
Restaurant	Per seat	7.0 pounds	4 days (2x per week)	28.0 pounds
Bar / Lounge	Per seat	3.5 pounds	4 days (2x per week)	14.0 pounds
Theater	Per seat	2.5 pounds	4 days (2x per week)	10.0 pounds
Marina	Per boat slip	2.7 pounds	7 days (1x per week)	18.8 pounds

[10] Solid Waste Management and Resource Recovery Technical Assistance Handbook, published by the State of Florida Department of Environmental Regulation, October, 1976, Table 5-4 Estimated Amounts of Solid Waste, p. 49.

Step 5. Calculate the impact fee per impact unit among the various categories of demand.

The solid waste impact fees per impact unit for the types of new development occurring within the City are included in Table 5-3. The fees were calculated by multiplying the unit cost of capacity from Step 2 by the capacity demanded per impact unit for each development type in Table 5-2. Note that the fee for residential new development was calculated with the number of dwelling units as the selected impact unit, while the existing impact fees for a residential customer are assessed based on the number of dwelling units plus the number of bedrooms. It is recommended that the City modify the approach used to assess the solid waste impact fee to residential new development by assessing the fee based on the number dwelling units only. The City has reliable data for the solid waste generated by residential customers per dwelling unit (1.4 tons or 2,800 pounds per year). However, the number of persons living in the dwelling unit may not be known at the time the impact fee is due; therefore, it is more appropriate to use a single fee for residential new development, rather than adjusting the fee higher or lower based on the estimated number of persons in the unit.

Table 5-3. Impact Fee per Impact Unit by New Development Type

Development Type	Impact Unit	Calculated Fee
Residential	Dwelling Unit	$631.34
Hotel / Motel	Bedroom	$94.06
Office	100 SF	$47.03
Retail	100 SF	$305.69
Restaurant	Seat	$329.20
Bar / Lounge	Seat	$164.60
Theater	Seat	$117.57
Marina	Boat Slip	$220.97

5.2. National and State of Florida Fee Comparison

The survey referenced to provide national and state-level comparisons of the sanitary sewer and stormwater impact fees did not include a survey of solid waste impact fees. Therefore, no comparisons to national or State of Florida averages were included in this section. In addition, the impact fees assessed by other municipalities similar to the City were reviewed and it was noted that many of these communities did not assess a solid waste impact fee, indicating that solid waste impact fees may be relatively uncommon in the State of Florida.

6. Stormwater Management

This section documents the steps completed and the calculations performed to prepare the updated maximum cost justified stormwater management impact fees using the capacity buy-in approach. The City does not currently assess stormwater impact fees to new development contributing stormwater runoff to its stormwater system; however, the City does assess a separate stormwater user fee to recover the annual costs to operate and maintain its stormwater system and to acquire and install capital facilities. The maximum cost justified impact fees calculated in this section were compared to other stormwater management impact fees throughout the U.S. and the State of Florida at the end of this report section.

6.1. Fee Calculation

Step 1. Estimate the value of qualifying system facilities and apply adjustments.

The City provided a listing of individual stormwater system assets known to be in service as of FY 2022. Each individual asset was reviewed based on its description and categorization under sub-headings within the listing to determine if the asset should be included in the fee calculation. The assets included in the fee calculation were those that were clearly identified as being capacity-providing backbone infrastructure assets, which for the City's stormwater management system, were recognized to be green infrastructure, piping, pump stations, gravity and injection wells, inlets, chambers, culverts, outfalls, and other fixed infrastructure used to collect and manage stormwater runoff.

Next, the total RCNLD value of qualifying assets included in the fee calculation was estimated. For the calculation of RCNLD value, the original cost of each asset was escalated to current year (2023) dollars based on the year the asset was acquired and placed in service, and the corresponding escalation factor for that year. The reproduction value of each asset was adjusted by its indexed accumulated depreciation to derive the RCNLD amount. Escalation factors for each year were developed using the ENR CCI.

The total RCNLD values of the stormwater management system's qualifying assets are shown by category in Table 6-1. As shown in the table, system value was calculated to be $30.5 million. Note that the descriptions of individual assets did not allow for all assets to be clearly identified and categorized. These assets were regarded as general infrastructure and were assumed to be comprised of a collection of different qualifying assets that were grouped together for capital asset accounting purposes. To be included in the fee calculation, a 40-year useful life was estimated for these assets.

Table 6-1. Summary of Qualifying Stormwater Facility Values - RCNLD

Description	Amount
Pump Stations	$1,416,590
Chambers	766,631
Culverts	32,297
Outfalls	8,464,509
Basin Wells	3,884,661

Description	Amount
Stormwater Pipes	0
Inlets	8,196
Valves	0
Gravity / Injection Wells	2,968,620
Green Infrastructure	1,814,078
General Infrastructure (uncategorized)	11,161,171
Total	**$30,516,753**

Two adjustments were made to the RCNLD value in Table 6-1. The first was for grant funded assets and the second was for outstanding debt used to finance the facilities included in the calculation. No adjustment was made for contributed assets as the City reported that the amount of assets that were contributed by private entities was immaterial.

Grant Funded Assets:

The City reported that it has obtained grant funding to fund all or a portion of several qualifying stormwater assets. These assets were identified as being related to the construction of the Dennis Street Pump Station, the White Street Pump Station, various gravity wells, and other miscellaneous qualifying stormwater infrastructure. The total RCNLD value of assets funded with grant monies was approximately $9.1 million and this amount was subtracted from the total RCNLD value of qualifying assets, as assets that were funded with federal, state, or local grants do not represent an investment in system capacity by the City.[11]

Outstanding Debt:

An adjustment for outstanding debt was made to the RCNLD value to reflect that a portion of the City's past investment in system capacity was financed with debt that may be repaid with future revenues from its stormwater user fees. This adjustment prevents charging customers twice for the cost of the capacity-providing asset, once when paying the impact fee, and then again when paying the user fee to fund the repayment of the debt principal. In addition, the City has confirmed that it does not use impact fee revenues to repay existing debt; therefore, the full amount of the outstanding debt principal was included in the fee calculation as a credit.

The outstanding debt of the City's stormwater system was comprised of intergovernmental loans from the General Fund and the Sewer Fund. The City reported that these loans were used to fund the acquisition of qualifying infrastructure assets; therefore, the outstanding principal associated with this debt, which was approximately $1.3 million as of FY 2022, was subtracted from the RCNLD value.

The resulting adjustments to the RCNLD value to account for grant funded assets and outstanding debt are shown in Table 6-2. As shown in the table, the net adjusted RCNLD value was roughly $20.1 million.

[11] The RCNLD value of assets funded with grant monies was estimated based on the amount of grant funding received, year grant funding was received or the year the asset was assumed to be placed in service, the estimated useful life of those assets, and the relevant cost escalation factor for the year the asset was assumed to be placed in service, using the ENR CCI.

Table 6-2. Net Adjusted RCNLD Value of Qualifying Stormwater Assets

Description	Amount
RCNLD Value	$30,516,753
Less: Adjustment for Grant Funded Assets	-9,099,242
Less: Adjustment for Outstanding Debt	-1,288,278
Net Adjusted RCNLD Value	**$20,129,232**

Step 2. Calculate the unit cost of system capacity.

The capacity of the stormwater system needs to be sufficient to handle stormwater runoff from each property's IA. Therefore, the capacity that was used for the purposes of the impact fee calculations was specified in terms of the amount of IA for which the City is providing its current level of stormwater management service. Therefore, the cost per unit of system capacity was calculated by dividing the net adjusted RCNLD value (estimated in Step 1) by the amount of IA managed by the system. The amount of IA was estimated based on the reported number of equivalent stormwater units ("ESU") served by the City as of FY 2022, which was 22,093 ESUs. Therefore, the cost per unit of system capacity was calculated to be roughly $0.63272 per SF of IA ($20,129,232 ÷ 31,813,920 SF of IA), where one ESU is equivalent to 1,440 SF of IA.

Note that the City has determined that the average single-family residence in the City includes 1,440 SF of IA, which is the value of one ESU; therefore, all residential parcels have been assigned one ESU per dwelling unit. Generally, the number of ESUs has been calculated individually for each parcel of non-residential property by dividing 75 percent of the IA by 1,440 square feet. For example, the City's stormwater user fee is assessed to non-residential properties based on the number of ESUs associated with the property.

Step 3. Estimate the capacity demand associated with one service unit of new development.

The smallest service unit of new development was defined as one ESU, which represents the SF of IA for a typical residential dwelling within the City. The average residential parcel was reported by the City to contain 1,440 SF of IA.

Step 4. Calculate the impact fee per unit of new development.

The stormwater impact fee for one ESU, or the base unit of demand, was calculated by multiplying the unit cost of capacity from Step 2 by the SF of IA associated with one unit of new development from Step 3. This calculation is shown in Table 6-3.

Table 6-3. Impact Fee per Unit of New Development

Description	Amount
Unit Cost of Capacity ($ per SF of IA)	$0.63272
Capacity Demanded by the Base Unit (SF of IA)	1,440
Impact Fee per Unit of New Development	$683.34

Step 5. Discuss how to scale the impact fee among the various categories of demand.

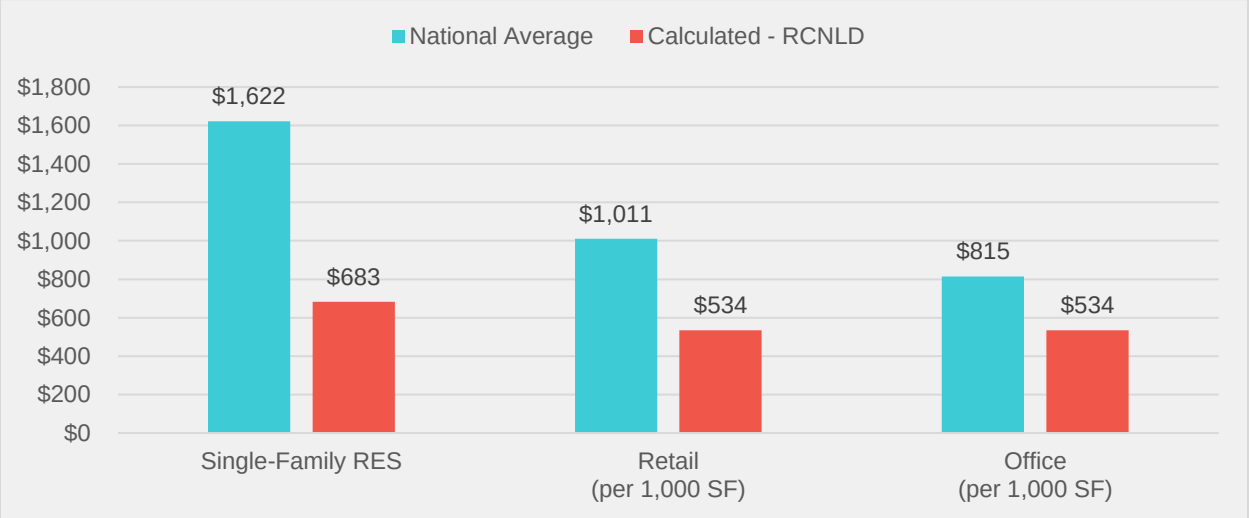
The City currently scales the stormwater user fee it assesses to recover the system's ongoing operating and maintenance and capital related costs. It does so to reflect that some properties contain more IA than others and that these properties should pay a higher fee to reflect their proportionate share of runoff contributed to the system. Therefore, it is recommended that if the City elects to assess a stormwater impact fee that the fee be scaled based on the estimated amount of IA for the new development, relative to the IA associated with an ESU.

6.2. National and State of Florida Fee Comparison

A comparison of the calculated maximum supportable cost justified stormwater fee per ESU to the national average for stormwater impact fees, as provided in a recent national impact fee survey, is shown in Figure 6-1. Note that the survey used a limited sample size to determine the average stormwater impact fee throughout the State of Florida. As a result, the comparison of the calculated stormwater impact fees in the City to this average was of limited use and secondly, it indicates that stormwater impact fees are not commonly assessed throughout the state.

As shown in Figure 6-1, the calculated fees for the City were less than the national average for each of the three property types, with the average fee for a single family across the U.S. of $1,622 being $939 higher than the calculated fee for a typical residential property in the City.[12] The reason for this difference could be that the City has received more grant funding for stormwater infrastructure than other systems in the U.S., has fewer miles of stormwater conveyance infrastructure per amount of IA, or it may be possible that the City could be overestimating the amount of IA within the service area. The City should consider conducting a more in-depth analysis of residential and non-residential properties to validate existing IA data.

Figure 6-1. Stormwater Impact Fee Comparison



Source: National average and State of FL average obtained from Duncan and Associates 2019 National Impact Fee Survey. These averages for a single-family dwelling assumed a 2,000 SF unit on 10,000 SF lot at a density of 4 units per acre, while retail and office assumed a 100,000 SF shopping center with a 0.15 floor area ratio and a 100,000 SF general office building with a 0.25 floor area ratio, respectively. Calculated – RCNLD fees for retail and office buildings each assumed one-story buildings and an additional 500 SF of IA per 1,000 SF of floor area.

[12] National and state averages for a single-family dwelling assumed a 2,000 SF unit on 10,000 SF lot at a density of 4 units per acre, while retail and office assumed a 100,000 SF shopping center with a 0.15 floor area ratio and a 100,000 SF general office building with a 0.25 floor area ratio, respectively. Calculated – RCNLD fees for retail and office buildings each assumed one-story buildings and an additional 500 SF of IA per 1,000 SF of floor area.

7. Fee Implementation

The Florida Impact Fee Act states that an increase of an impact fee of up to 25 percent of the current fee must be implemented in two equal annual adjustments, while an increase of between 25 to 50 percent must be implemented in four equal annual installments.[13] The Act states that an impact fee cannot be increased by more than 50 percent and that an impact fee cannot be increased more than once every four years. As a result, the maximum cost justified impact fees for sanitary sewer and solid waste calculated as part of this report were compared to the City's existing impact fees to evaluate several possible implementation scenarios for each fee.

7.1. Sanitary Sewer

Certain assumptions were made to calculate existing sanitary sewer impact fees to facilitate the comparison because the City currently assesses sanitary sewer impact fees according to property type and the associated impact unit (dwelling units, sleeping rooms, seats, gross building square feet, slips), whereas the updated fees were scaled based on water meter size to recognize differing uses of system capacity among new customers. Therefore, the number of impact units and water meter size were assumed and documented in Table 7-1 to facilitate these comparisons.

The results of the comparison of calculated maximum cost justified and City existing sanitary sewer impact fees are shown in Table 7-1. As shown in the table, the calculated maximum cost justified fees for residential, hotel/motel, retail, office, theater, and marinas were calculated to be more than 50 percent higher than the existing impact fees. The calculated maximum cost justified fees for bars and lounges was between 25 and 50 percent higher than the existing fee, while the calculated fee for a typical restaurant was less than 25 percent higher than the existing fee.

Table 7-1. Comparison of Existing / Calculated Maximum Cost Justified Sanitary Sewer Impact Fees

Property Use	Characteristics	Estimated Existing	Calculated	$ Change	% Change
Residential	3 bedrooms and a 5/8-inch water meter.	$900	$2,441	$1,541	171.2%
Hotel / Motel	20 sleeping rooms and a 1-inch water meter.	$4,000	$6,102	$2,102	52.6%
Restaurant	50 seats and a 1-inch water meter.	$5,000	$6,102	$1,102	22.0%
Retail	5,000 SF of gross building area and a 5/8-inch water meter.	$1,000	$2,441	$1,441	144.1%
Office	7,500 SF of gross building area and a 5/8-inch water meter.	$1,500	$2,441	$941	62.7%
Bars and Lounges	30 seats and a 5/8-inch water meter.	$1,800	$2,441	$641	35.6%
Theater	150 seats and a 1-inch water meter.	$1,500	$6,102	$4,602	306.8%

[13] These requirements are within Paragraph 6 of the Florida Impact Fee Act within Section 163.31801 of the Florida Statutes.

Property Use	Characteristics	Estimated Existing	Calculated	$ Change	% Change
Marina	50 slips and a 1-inch water meter.	$2,500	$6,102	$3,602	144.1%

Note: The Estimated Existing fees were estimated using the City's existing impact fees and the assumed characteristics identified in the table.

According to Paragraph 6 of the Florida Impact Fee Act, unless the City elects to meet the additional requirements set forth in Paragraphs 6(g)1-3, which will allow the City to increase the fees beyond the phase-in limitations, the City will not be able to increase the existing fees by more than 50 percent over a four-year period. If the City elects to meet the additional requirements in Paragraphs 6(g)1-3, it could adjust the sanitary sewer fees to their maximum cost justified levels (see Table 4-5) over a multiyear phase-in period.

Separate fee implementation options are shown in Table 7-2 and Table 7-3. The approach in Table 7-2 shows projected sanitary sewer impact fees assuming the City elects to meet the additional requirements in Paragraphs 6(g)1-3 (allowing the City to increase the fees beyond the phase-in limitations), uses water meter types and sizes as demand categories, increases the fees to their maximum cost justified levels, and implements the increases over a five-year period. The approach in Table 7-3 shows projected sanitary sewer impact fees assuming the City does not elect to meet the additional requirements. In this scenario, the City's existing impact fee for a typical residential development (single-family dwelling, with three bedrooms = $900) was increased to the maximum allowable under the Act (50 percent) over five years for a customer with a 5/8-inch T-10 water meter. To maintain the recommended fee scaling, all other fees were scaled according to the scaling shown in Table 4-4.

Table 7-2. Sanitary Sewer Impact Fees – Implementation Approach 1

Water Meter Size/Type	Year 1	Year 2	Year 3	Year 4	Year 5
5/8" – T-10	$1,208	$1,516	$1,825	$2,133	$2,441
5/8" – Mach 10	$1,510	$1,895	$2,281	$2,666	$3,051
3/4" – T-10	$1,812	$2,275	$2,737	$3,199	$3,661
3/4" – Mach 10	$2,114	$2,654	$3,193	$3,732	$4,272
1" – T-10	$3,020	$3,791	$4,561	$5,332	$6,102
1" – Mach 10	$3,323	$4,170	$5,018	$5,865	$6,713
1-1/2" – T-10	$6,041	$7,582	$9,123	$10,664	$12,205
1-1/2" – Mach 10	$7,551	$9,477	$11,403	$13,330	$15,256
2" – T-10	$9,665	$12,131	$14,596	$17,062	$19,527
2" – Mach 10	$9,665	$12,131	$14,596	$17,062	$19,527
3" – Mach 10	$30,205	$37,909	$45,614	$53,319	$61,023
4" – Mach 10	$75,512	$94,773	$114,035	$133,296	$152,558
6" – Mach 10	$120,819	$151,637	$182,456	$213,274	$244,093
8" – Mach 10	$241,637	$303,274	$364,911	$426,549	$488,186

Note: The fees shown under this implementation approach assume that the City does elect to meet the additional requirements of Paragraphs 6(g)1-3, allowing it to raise fees beyond the phase-in limitations, and raises the fees to their maximum cost justified level over five years.

Table 7-3. Sanitary Sewer Impact Fees – Implementation Approach 2

Water Meter Size/Type	Year 1	Year 2	Year 3	Year 4
5/8" – T-10	$1013	$1,125	$1,238	$1350
5/8" – Mach 10	$1,266	$1,406	$1,547	$1,688
3/4" – T-10	$1,485	$1,620	$1,755	$2,025
3/4" – Mach 10	$1,772	$1,969	$2,166	$2,363
1" – T-10	$2,531	$2,813	$3,094	$3,375
1" – Mach 10	$2,784	$3,094	$3,403	$3,713
1-1/2" – T-10	$5,063	$5,625	$6,188	$6,750
1-1/2" – Mach 10	$6,328	$7,031	$7,734	$8,438
2" – T-10	$8,100	$9,000	$9,900	$10,080
2" – Mach 10	$8,100	$9,000	$9,900	$10,080
3" – Mach 10	$25,313	$28,125	$30,938	$33,750
4" – Mach 10	$63,281	$70,313	$77,344	$84,375
6" – Mach 10	$101,250	$112,500	$123,750	$135,000
8" – Mach 10	$202,500	$225,000	$247,500	$270,000

Note: The fees shown under this implementation approach assume that the City does not elect to meet the additional requirements of Paragraphs 6(g)1-3 but raises fees up to the maximum allowable (50 percent) under the Florida Impact Fee Act phase-in limitations over five years.

7.2. Solid Waste

The results of the comparison of calculated maximum cost justified and City existing solid waste impact fees are shown in Table 7-4. Note that the maximum cost justified solid waste impact fees were calculated on an impact unit basis for each property use; therefore, no additional assumptions were needed to facilitate a comparison to the maximum cost justified fees. As shown in the table, the calculated maximum cost justified fees for residential, retail, restaurant, bar and lounge, theater, and marina property uses were each higher than 50 percent. The calculated maximum cost justified fees for office buildings was less than 25 percent, while the calculated fee for hotel / motel properties decreased relative to the existing fee.

Table 7-4. Comparison of Existing and Calculated Maximum Cost Justified Solid Waste Impact Fees

Property Use	Characteristics	Estimated Existing	Calculated	$ Change	% Change
Residential	3 bedroom single-family dwelling.	$344	$631	$287	83.5%
Hotel / Motel	20 sleeping rooms.	$2,580	$1,881	-$699	-27.1%
Restaurant	50 customer seats.	$8,600	$16,460	$7,860	91.4%
Retail	5,000 SF of gross building area.	$4,300	$15,284	$10,984	255.4%

Property Use	Characteristics	Estimated Existing	Calculated	$ Change	% Change
Office	7,500 SF of gross building area.	$3,225	$3,527	$302	9.4%
Bars and Lounges	30 customer seats.	$2,580	$4,938	$2,358	91.4%
Theater	150 customer seats.	$6,450	$17,636	$11,186	173.4%
Marina	50 boat slips.	$2,150	$11,049	$8,899	413.9%

Note: The Estimated Existing fees were estimated using the City's existing impact fees and the assumed characteristics identified in the table.

Separate fee implementation options are shown in Table 7-5 and Table 7-6. The approach in Table 7-5 shows projected solid waste impact fees assuming the City meets the additional requirements in Paragraphs 6(g)1-3, which will allow the City to increase the fees beyond the phase-in limitations, elects to increase the fees to their maximum cost justified levels, and implements the increases over a five-year period. The approach in Table 7-6 shows projected solid waste impact fees assuming the City does not elect to meet the additional requirements but with projected fees increased to the maximum level allowable by the Act (50 percent) over five years.

Table 7-5. Solid Waste Impact Fees – Implementation Approach 1

Property Use	Impact Unit	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	Dwelling unit	$401.47	$458.94	$516.41	$573.87	$631.34
Hotel / Motel	Sleeping room	$94.06	$94.06	$94.06	$94.06	$94.06
Office	100 SF	$43.81	$44.61	$45.42	$46.22	$47.03
Retail	100 SF	$129.94	$173.87	$217.81	$261.75	$305.69
Restaurant	Seat	$203.44	$234.88	$266.32	$297.76	$329.20
Bar / Lounge	Seat	$101.72	$117.44	$133.16	$148.88	$164.60
Theater	Seat	$57.91	$72.83	$87.74	$102.66	$117.57
Marina	Slip	$78.59	$114.19	$149.78	$185.38	$220.97

Note: The fees projected under this implementation approach assume that the City does elect to meet the additional requirements of Paragraphs 6(g)1-3, allowing it to raise fees beyond the phase-in limitations, and raises the fees to their maximum cost justified level over five years.

Table 7-6. Solid Waste Impact Fees – Implementation Approach 2

Property Use	Impact Unit	Year 1	Year 2	Year 3	Year 4
Residential	Dwelling unit	$387.00	$430.00	$473.00	$516.00
Hotel / Motel	Sleeping room	$94.06	$94.06	$94.06	$94.06
Office	100 SF	$45.01	$47.03	$47.03	$47.03
Retail	100 SF	$96.75	$107.50	$118.25	$129.00
Restaurant	Seat	$193.50	$215.00	$236.50	$258.00
Bar / Lounge	Seat	$96.75	$107.50	$118.25	$129.00
Theater	Seat	$48.38	$53.75	$59.13	$64.50
Marina	Slip	$48.38	$53.75	$59.13	$64.50

Note: The fees projected under this implementation approach assume that the City does not elect to meet the requirements of Paragraphs 6(g)1-3 but raises fees up to the maximum allowable under the Florida Impact Fee Act phase-in limitations over five years.

7.3. Stormwater

The City does not currently assess stormwater management impact fees; therefore, there is no comparison of the maximum allowable cost justified fees. The City may implement the maximum cost justified fee of $683.34 per ESU or a lesser amount. It may also elect to phase-in the implementation of the stormwater impact fee. For example, a five-year phase-in of the maximum cost justified stormwater impact fee is shown in Table 7-7.

Table 7-7. Stormwater Impact Fee – 4-year Phase-In Example

Property Use	Impact Unit	Year 1	Year 2	Year 3	Year 4
All Properties	ESU	$170.83	$341.67	$512.50	$683.34

Section 74-365 of the City's municipal code contains provisions related to stormwater user fee adjustments. These adjustments may be granted to properties that install retention and/or detention facilities. More specifically, Paragraph (f) of Section 74-365 states:

> *(f) User fee adjustments and exempt property determinations. After the City has determined a user fee based on impervious area calculations, residential and nonresidential developed property owners may be eligible for an exempt property determination or a user fee adjustment when certain criteria are met. It is the property owner's responsibility to provide proof that conditions exist that may qualify a property for a particular adjustment or exempt property determination.*
>
> *(1) Retention/detention fee adjustment. The City may allow adjustment of stormwater user fees for privately maintained retention and/or detention facilities upon an inspection and approval of such facilities by a certified engineer. French vertical drains are not acceptable stormwater facilities when determining fee adjustment eligibility. The rate of adjustment for privately maintained retention/detention facilities is based on the following:*
>
> *a. Where stormwater management facilities are constructed and maintained, which collect and retain 100 percent of runoff on the property (measured on the basis of a 72-hour, 25-year storm event), the property owner shall receive a reduction of the user fee by 15 percent.*

b. Where stormwater management facilities are constructed and maintained, which collect and retain 100 percent of runoff on the property (measured on the basis of a 72-hour, 50-year storm event), the property owner shall receive a reduction of the user fee by 25 percent.

The following conditions must be met in order for an eligible property owner to receive the user fee adjustment:

The property owner must apply for the user fee adjustment in writing and provide proof of 100 percent runoff retention on the property by submitting hydraulic/hydrologic calculations and topographic maps signed and sealed by a certified engineer to the City manager's designee.

The City manager's designee must agree that 100 percent of the property's runoff will not have an impact on City owned or maintained stormwater facilities.

The property owner must enter into a maintenance agreement with the City for continued maintenance of private stormwater facilities.

Given this incentive for property owners to reduce their stormwater user fee, if the City elects to implement a stormwater impact fee, it should also consider allowing new development to receive a credit against their stormwater impact fee for qualifying stormwater mitigation measures. In designing a credit system for the stormwater impact fees, the following should be considered:

1. How much the potential credit against the paid impact fee will be? For example, will the impact fee be adjusted proportional to the stormwater user fee (15 percent or 25 percent, per Paragraph (f) of Section 74-365 of the City code) reduction?
2. The allowable time period for which the new development can install retention and/or detention facilities on their property and still be eligible to receive a credit to offset the impact fee. For example, must the retention and/or detention facilities be installed at the time the impact fee is due to receive the credit, prior to receiving the certificate of occupancy ("CO"), or some length of time after the CO has been issued?
3. If a property owner wins an appeal of a dwelling unit and/or impervious area calculation, how would this affect a previously paid stormwater impact fee?

8. Conclusions and Recommendations

The main conclusions and recommendations resulting from the calculation of the maximum cost justified sanitary sewer, solid waste, and stormwater impact fees are included below.

8.1. Sanitary Sewer

1. The City should modify the approach used to identify categories of demand from property type and impact units, such as dwelling units, seats, floor area, and slips to customer water meter type and size. This is a better approach because it uses more reliable data, such as the relative differences between maximum flow rates among water meters (sourced from manufacturer specification sheets) and because it allows for differing capacity demands to be reflected within the same property use. For example, some new developments may place a higher capacity demand on the system (and thus require a larger water meter) than another new development that is the same property type with the same number of impact units.
2. The maximum cost justified sanitary sewer impact fees are shown in Table 4-5 and were calculated to range from $2,441 for a customer with a 5/8-inch displacement meter to $488,186 for a customer with an 8-inch ultrasonic meter. The types of meters reported to be installed by FKAA were used to scale the calculated fees and were assumed to include displacement and ultrasonic meter types. If the meter types used by FKAA change, then the scaling may need to be updated and the resulting fees could be materially different.
3. The calculated fees for single-family, retail, and office property uses were compared to national and State of Florida sanitary sewer impact fees from a recent industry survey. The national averages were higher than the calculated fees for all three property types, while the State of Florida average was more comparable, but lower. For example, while the statewide average for the residential fee was comparable to the calculated residential fee, the national average was $3,896 per dwelling unit, which was $1,455 higher than the City's maximum supportable cost justified residential fee shown in the comparison.

   Possible reasons for this difference are as follows:

   a. The City's system and the sanitary sewer systems throughout the state of Florida may be older and have depreciated more than in other parts of the country.
   b. The average number of persons per household is less in the City than on average across the U.S., resulting in a lower capacity demand for a typical residential customer than in other parts of the country.
   c. A larger portion of residential customers in the City may not be full-time residents as compared to other parts of the country; therefore, the average day demand of one EDU, which was estimated based on annual water use and estimated wastewater flows and used to calculate the fee, is less than it would be if there were a higher percentage of year-round residents.
4. The calculated fees were also compared to the City's existing sanitary sewer impact fees. Results showed the calculated maximum cost justified fees for residential, hotel/motel, retail, office, theater, and marinas were calculated to be more than 50 percent higher than the existing impact fees. The

calculated maximum cost justified fees for bars and lounges was between 25 and 50 percent higher than the existing fee, while the calculated fee for a typical restaurant was less than 25 percent higher than the existing fee.

   a. The Florida Impact Fee Act limits the amount an impact fee can be increased to 50 percent. Furthermore, if a municipality elects to increase a fee by between 25 and 50 percent, it must do so in four equal annual installments, while if it elects to increase a fee by up to 25 percent, it must do so in two equal annual installments. The impact fee is not allowed to be increased more than once every four years.

   b. Specific language is included within Paragraphs 6(g)1-3 allowing a municipality to implement a fee increase beyond those authorized by the Act, provided it meets certain requirements.

5. Projected fees under two separate sanitary sewer implementation approaches were shown in Table 7-2 and Table 7-3.

   a. The first approach provided projected fees over a five-year implementation period assuming the City elects to meet the additional requirements under Paragraphs 6(g)1-3 of the Florida Impact Fee Act, which would allow the City to implement fees that would be more than 50 percent higher than the existing impact fees. These fees are shown in Table 7-2.

      i. Note that the City could elect to implement the maximum supportable cost justified fees shown in Table 4-5 with no phase-in period if it meets the additional requirements in Paragraphs 6(g)1-3 of the Act.

   b. The second approach provided projected fees over a five-year implementation period assuming the City does not meet the additional requirements of Paragraphs 6(g)1-3, subjecting it to the Act's phase-in limitations. These fees are shown in Table 7-3. Under this approach, the City's existing impact fee for a typical residential development (single-family dwelling, with three bedrooms = $900) was increased to the maximum allowable under the Act (50 percent) over 5-years for a customer with a 5/8-inch T-10 water meter. To maintain the recommended fee scaling, all other fees were scaled according to the scaling shown in Table 4-4. The projected fee in Year 5 of the implementation for a 5/8-inch T-10 water meter was $1,350, as compared to $2,441 under the first approach.

8.2. Solid Waste

1. The categories of demand under the existing impact fees are based on property type and impact units. No changes are recommended to this approach as it reflects the common types of new development within the City and provides a reasonable approach by which to estimate the proportionate use of system capacity by new development.

2. The City should modify the approach used to assess the solid waste impact fee to residential new development. For example, the existing fees are assessed based on the number of dwelling units plus the number of bedrooms. It is recommended that the City assess the fee based on the number of dwelling units only. The City has reliable data for the pounds of solid waste generated by residential customers per dwelling unit (1.4 tons of 2,800 pounds per year). However, the number of persons living in the dwelling unit is not known at the time of new development; therefore, it is more appropriate to use a single fee for residential new development, rather than adjusting the fee higher or lower based on the estimated number of persons in the unit.

a. The latest ACS data from the U.S. Census Bureau was reviewed to determine the extent to which a multifamily dwelling unit would produce less solid waste than a single-family dwelling unit based on a comparison of persons per household. Owner-occupied dwelling units were assumed to represent single-family dwellings, while renter-occupied dwelling units were assumed to represent multifamily units within the ACS data. The data showed that the average household size of an owner-occupied dwelling unit was 2.31 persons, while the average household size of a renter-occupied dwelling unit was 2.34 persons. Based on this comparison, it was determined that the amount of solid waste produced by a single-family dwelling unit was comparable to the amount of solid waste produced by a multifamily dwelling unit and that no adjustment to a multifamily impact fee relative to the single-family impact fee would be needed.

3. The maximum cost justified solid waste impact fees were calculated to range from $47.03 per 100 SF of gross floor area for an office development to $631.34 per dwelling unit for residential new development. Calculated fees for all property types are shown in Table 5-3.
4. The impact fees assessed by other similar municipalities were reviewed and it was noted that many of these communities did not assess a solid waste impact fee, indicating that solid waste impact fees may be relatively uncommon in the State of Florida.
5. The calculated fees were also compared to the City's existing solid waste impact fees. The calculated maximum cost justified fees for residential, retail, restaurant, bar and lounge, theater, and marina property uses were each higher than 50 percent. The calculated maximum cost justified fees for office buildings was less than 25 percent, while the calculated fee for hotel / motel properties decreased relative to the existing fee.
6. Projected fees under two separate solid waste implementation approaches were provided in Table 7-5 and Table 7-6.
    a. The first approach provided projected fees over a five-year implementation period assuming the City elects to meet the additional requirements under Paragraphs 6(g)1-3 of the Florida Impact Fee Act, which would allow the City to implement fees that would be more than 50 percent higher than the existing impact fees. These fees are shown in Table 7-5.
        i. Note that the City could elect to implement the maximum supportable cost justified fees shown in Table 5-3 with no phase-in period if it meets the additional requirements in Paragraphs 6(g)1-3 of the Act.
    b. The second approach provided projected fees over a five-year implementation period assuming the City does not meet the additional requirements of Paragraphs 6(g)1-3, subjecting it to the Act's phase-in limitations. These fees are shown in Table 7-6. Consistent with Paragraph 6 of the Act, increases to the residential, retail, restaurant, bar and lounge, theater, and marina fees were limited to 50 percent over a five-year period, while the fee for a hotel / motel property was decreased to the calculated fee. The fee for new office developments was increased by 9.4 percent over two years.

8.3. Stormwater

1. The maximum cost justified stormwater impact fee for one ESU was calculated to be $683.34.
2. The City currently scales the stormwater user fee it assesses to recover the system's ongoing operating and maintenance and capital related costs. It does so to reflect that some properties contain more IA than others and that these properties should pay a higher fee to reflect their proportionate share of runoff contributed to the system. Therefore, it is recommended that if the City elects to assess a stormwater impact fee that the fee be scaled based on the estimated amount of IA for the new development, relative to the IA associated with an ESU.
3. A comparison of the calculated maximum supportable cost justified stormwater fee per ESU to the national averages for stormwater impact fees was completed. Note that the survey used a limited sample size to determine the average stormwater impact fee throughout the State of Florida. As a result, the comparison of the calculated stormwater impact fees in the City to this average was of limited use and secondly, it indicates that stormwater impact fees are not commonly assessed throughout the state.

   The calculated fees were less than the national average for each of the three property uses, with the average fee for a single family across the U.S. of $1,622 being $939 higher than the calculated fee for a typical residential property in the City. This difference could be that the City has received more grant funding for its stormwater infrastructure than other systems in the U.S., has fewer miles of stormwater conveyance infrastructure per amount of IA, or it may be possible that the City is overestimating the amount of IA associated with individual properties. The City should consider conducting a more in-depth analysis of residential and non-residential properties to validate existing data.
4. Section 74-365 of the City's municipal code contains provisions related to stormwater user fee adjustments. These adjustments may be granted to properties that install retention and/or detention facilities. If the City elects to implement a stormwater management impact fee, it should also consider allowing new development to receive a credit against their stormwater impact fee for qualifying stormwater mitigation measures. In designing a credit system for the stormwater impact fees, the following should be considered:
   a. How much the potential credit against the paid impact fee will be? For example, will the impact fee be adjusted proportional to the stormwater user fee (15 percent or 25 percent, per Paragraph (f) of Section 74-365 of the City code) reduction?
   b. The allowable time period for which the new development can install retention and/or detention facilities on their property and still be eligible to receive a credit to offset the impact fee. For example, must the retention and/or detention facilities be installed at the time the impact fee is due to receive the credit, prior to receiving the certificate of occupancy ("CO"), or some length of time after the CO has been issued?
   c. If a property owner wins an appeal of a dwelling unit and/or impervious area calculation, how would this affect a previously paid stormwater impact fee?