Miami Lakes Stormwater Rate Restudy

A. Background and Process

Recent focus on stormwater management through activities such as the completion of the update to the Stormwater Master Plan raised awareness that the Town Stormwater Utility cannot meet the demands for infrastructure improvements as well as anticipated increased water quality protection mandates from the State. In the adopted FY19-20 Budget, funding was approved for a rate restudy for the Utility. Since adoption of Ordinance 03-31 and rate setting Ordinance 03-32 in 2003, the rate structure and monthly rate has not changed. As noted in Section D of this report, the impacts of inflation on goods, services, and construction costs reduced the purchasing power for funding the stormwater program, while needs in stormwater and surface water management have increased over the same time period. With Council adoption of the current budget, the Town staff contracted with Wood to complete a rate restudy for the utility in the fall of 2019.

A rate study addresses current and future demand for funding to address known and anticipated resource needs to meet performance standards and best practices, addressing both water quality protection and control of runoff of surface waters, carried through the Town drainage system. The following process is followed in the completion of the restudy. This report provides findings from staff interviews, Town documents such as Ordinances and the Stormwater Master Plan as well as questionnaires used to capture details of stormwater operations in the Town.

1. **Current Program and Cost**. Understanding the delivery process and breadth of the existing program details and costs using current Town source documents, such as budgets, capital investment plans, master plans, and existing ordinances, along with interviews of appropriate staff provides an understanding of what is accomplished and what needs exist to meet target goals and community expectations. Part of the process of capturing current services is to identify needs and challenges facing the Town. This photo along NW 152th Terrace and NW 87th Place documents typical neighborhood flooding challenges. This event occurred on October 5, 2017.

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2. **Future Program Services.** Building upon the current service review and cost analysis, program goals and priorities for continued and improved system performance and maintenance are captured. Program gaps and strategies to address them are part of the future program analysis. Costs are estimated for changes in maintenance and operation level of service, priorities, capital needs, and staffing.

3. **Program and Financial Policies.** User fee policies that impact finance, legal and workflow to ensure that all appropriate controls and funding tools are considered, and options are presented to close the gap between current resources and priorities.

4. **Public Involvement.** Public understanding is important in making changes to local government programs and funding. A workshop with elected officials and the public is important to share findings and to gain advice and guidance on how changes may impact the Town. The Town may use the website to distribute information on the need to change and the potential impacts to the community.

5. **Ordinance Preparation.** Should the Council choose to change the current rates or rate structure, an ordinance and funding resolution will be necessary to implement such amendments to current practices and authority.

6. **Public Hearing.** Public feedback is important to the process to ensure that their ideas and concerns can be voiced and addressed. This should occur prior to any change in the rates or rate structure of the Stormwater Utility. In addition, the Town may choose to hold community meetings, for homeowners and businesses, to introduce the issues and needs to manage the drainage system.

The Council provides key direction in guiding any and all changes in utility operations and financial policy. This document provides background, identifies needs for resources, and sets forth analysis of policy on utility rates. Section E discusses various policy options as well as a cost model to project cash demand over the next nine fiscal years.

B. Current Services

Communities define stormwater management differently from a service perspective. There a range of activities carried out every day that can impact directly or indirectly the services focused on stormwater/surface water management. It often varies by region of the US and by climate. The following captures the activities carried out by staff or contractors to serve the businesses and residents of Miami Lakes. The financial needs to meet community expectations are directly related to these focus areas.

1. **Administration:** Administrative functions include the overall program planning, staff management, coordination across various Town operations, budget management, contracting for services, and coordination with billing operations of Miami-Dade County Water and Sewer Department (WASD) for utility revenue generation. Leadership is provided by the Public Works Director and Public Works Engineer whose positions are 50% funded by the Stormwater Utility.

   The Stormwater Utility was established in 2003 using an Equivalent Residential Unit (ERU) basis for charging residents and businesses within the Town. The current rate of $4.50/month/ERU has not been updated since original adoption. The Town pays WASD on a per-account basis for the billing and collection of revenue under the stormwater utility. (Charge is currently $1.04/account for 35,000 accounts and annual cost of $36,400).

2. **Special Programs**: These functions address public education and outreach, asset management and Geographic Information System (GIS) data management. They are carried out by operations in support of information sharing on the Town website as well as in Public Works operations.

3. **Stormwater Quality Management:** The Town is mandated to address stormwater quality management through compliance with the Municipal Separate Storm Sewer System (MS4) permit issued by the State. Activities that address the quality of runoff include watershed master planning, monitoring of runoff, erosion and sediment control for construction sites, street sweeping to remove particulates and debris from roadways, as well as spill response and site clean up as needed. In addition, there are capital investments in water quality treatment and best practices carried out under contract with Miami Dade County for canal cleaning and maintenance. Construction of Best Management Practices (BMPs) are used to establish on-site treatment, either by the private sector to comply with Town standards or by the Town to improve the quality of runoff. Examples of such practices are often referred to in the industry as Green Infrastructure and may include infiltration swales or trenches, rain gardens, and under-ground vaults.

   The Town has canals that are showing signs of bank erosion which can ultimately lead to loss of adjacent property as well as sediment loading into receiving waters. The Town has

completed two canal bank stabilizations projects in the last three years, using State grants for financing the projects.

4. **Engineering and Planning:** Engineering and planning activities overlap with stormwater quality management through master planning for both water quantity controls as well as water quality improvements. In addition, this program area focuses on development of local standards as well as enforcement of design criteria established to ensure that runoff controls are included in the development process to minimize quantity and quality impacts of stormwater. An additional area of service includes inspections which is a contracted service to provide in-field verification of site development standards for infrastructure construction and control of erosion and sediment from rain events occurring during the building period. Contracted services are used for inspection of BMPs, based on the mandates of the MS4 permit.

   The National Flood Insurance Program, Community Rating System (CRS) is implemented by the Town to address risk management with the resulting impacts on insurance rates for local property owners. The current CRS rate for the Town is Class 6 which provides a 20% flood insurance reduction in premiums for properties in the Town. The Building Department, Planning Department, Parks Department and Public Works Department work together to maintain and improve the CRS rating for Miami Lakes. In addition, the Town participates in the meetings held for implementation of the Local Mitigation Strategy (LMS). These programs target risk reduction of flood incidents.

   The Town Comprehensive Plan, under Ordinance 03-46, contains a section on Stormwater Management which sets the Level of Service standards for development within the corporate boundaries.

   Engineering services are contracted for the design of Town projects. Financial constraints limit the staff's ability to do in-house engineering design.

5. **Operations and Maintenance:** The Town operation of the drainage system is a key element of the stormwater utility. This includes the inspection of the system, maintenance of pipe and above ground stormwater facilities, curb and gutter maintenance along with emergency response to storm events and system failures. Maintenance of the system is critical to ensure optimal performance to carry runoff away from properties to reduce the potential for flooding. The drainage system will incur such issues as debris clogging, system capacity reduction resulting in the network's inability to carry design flows, and/or system failures due to the age of the system components. The Town is blessed with a robust tree canopy which can challenge the drainage system to handle leaves and debris that is swept into the system.

   Improvements to the drainage network are important to address system capacity to minimize local flood incidents while improving the quality of runoff. The Town implements

system expansion with minor replacements as well as addition of French drains that help provide both water quality improvements as well as attenuation of the volume carried in the system.

The Town fully funds through the stormwater utility two full-time positions (vacuum truck driver and assistant driver) to support system operation and maintenance. The current vac-truck is seven years old and will need replacement within four to five years.

Maintenance on the system is routinely executed, following a regular schedule; however, there are known "hot spots" that are addressed when storm events are predicted in advance. There is a complaint history that also serves to inform the Town staff of key locations that receive a more frequent evaluation and maintenance when needed. This information was used in the recent Stormwater Master Plan update to identify targets for sub-basin evaluation. When deficiencies are found through the routine operation and maintenance of the system, they are documented and addressed as funds become available.

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Use of contracted maintenance and operation of the system includes street sweeping, litter and debris pickup, and canal cleaning. These are typically five-year contracts and are performance based, using metrics such as lane-miles swept.

Key operation and maintenance activities include:

a. Pipe Flushing and Exfiltration Trench Cleaning
b. Swale inspection, maintenance and restoration
c. Street sweeping
d. Litter and debris pickup
e. Catch basin maintenance
f. Canal maintenance
g. Minor repairs and improvements

6. **Regulation and Enforcement:**

   The Town is a co-permittee with Miami-Dade County under Florida Environmental Protection MS4 permit number FLS 000003 which required the preparation of a comprehensive stormwater management program. Several key regulatory elements are requirement by the permit, in addition to the local code for management of stormwater.

   a. *Water quality monitoring and testing* is one component of the overall MS4 permit the Town addresses for water quality management. Currently, the Town contracts using an inter-governmental agreement with Miami Dade County for such services.
   b. *Public Education:* Public Education is a cornerstone of the MS4 permits developed under the Clean Water Act and initiated in 1990 for large and medium size communities (based on 1990 Census Data) that were greater than 100,000 population. Engagement with the citizens and businesses of the Town to inform them on how to reduce pollutants from stormwater by implementing activities that address lawn management, car washing, solid waste and litter reduction, and other key topics are required for all MS4 permits, regardless of the size of the community. The Town has stormwater pollution flyers and a video on the website in addition to other key material such as the *Lake Water Quality Best Practices and Recommendations* and *Lake Conditions and Town Management Recommendations*.
   c. *Illicit Discharges:* Another key element of the MS4 program is the removal of discharges that are not allowed under the MS4 discharge permit. These are referred to as "illicit" discharges and Public Works conducts inspections for potential illicit discharges (i.e., a discharge of something other than stormwater from the drainage system). When identified, they are reported to the County for follow-up and enforcement to remove the discharge.
   d. *Regulation of Development:* The land development process is managed by the Building Department to ensure that the land development code is followed. Plan reviews are performed as part of the land development permitting process and inspections are carried out to ensure that the Code is followed. The development review and construction inspection process, carried out by the Building Department, is focused on the construction of appropriate best practices for land management. The Town has not adopted low impact (or Green Infrastructure) development regulations but there is an interest that this be done and is currently an initiative in the Town's Strategic Plan.

7. **Capital Projects:** The most recent update of the Stormwater Master Plan (#3, May 2019) includes approximately $13,700,000 in major capital improvements that are recommended for implementation over the next 10 years. Not only did the recent Plan address operations, maintenance and capital project needs for the overall stormwater management process in the Town, it also addressed the potential impacts of groundwater table rise,

which has an impact on construction costs as well as overall drainage infrastructure performance.

The current Five-Year Capital Improvement Program includes contingency planning in for stormwater needs in the coming fiscal years. With an increase in stormwater revenue through a rate adjustment, these funds should not be needed for known future capital projects., They are not included in the rate review completed in this study but should be reviewed when the Five-Year CIP is updated in the budget process for FY20-21.

FY20-21: $500,000
FY22-23: $500,000
FY23-24: $1,000,000

The total Capital Program, including the Master Plan estimate of $13,700,000 and the 2019-20 Five-Year Capital Improvement Program, is $15,170,900 over a 10-year period. The following table provides a summary of project locations and estimated costs through FY28-29.

Data Source	Specific Activity	FY19-20	FY20-21	FY21-22	FY22-23	FY23-24	FY24-25	FY25-26	FY26-27	FY27-28	FY28-29	TOTALS
Five Yr CIP	West Lakes - Phase III	$ 1,920,000										$ 1,920,000
Five Yr CIP	Royal Oaks	$ 919,907										$ 919,907
Master Plan	Commerce Way	$ 1,520,000										$ 1,520,000
Master Plan	Royal Oaks-1st Addition		$ 319,000									$ 319,000
Five Yr CIP	Canal Bank Stabilization Phase 3			$ 1,000,000								$ 1,000,000
Master Plan	Royal Oaks-Sixth Add.			$665,000								$ 665,000
Master Plan	Royal Oaks-8th Add.				$679,000							$ 679,000
New Project	NW 159th Terrace Drainage				$ 190,000							$ 190,000
New Project	NW 166th Street Drainage				$ 200,000							$ 200,000
Master Plan	West Lakes Gardens					$2,857,000						$ 2,857,000
Master Plan	Miami Lakeway North (Southern)						$1,693,000					$ 1,693,000
Master Plan	West Lakes Gardens-2nd Add.							$1,325,000				$ 1,325,000
Master Plan	Royal Lakes-First Add.								$224,000			$ 224,000
Master Plan	South of 154th									$888,000		$ 888,000
Master Plan	Alameda Northwest										$675,000	$ 675,000
Master Plan	NW 83rd Place										$96,000	$ 96,000
	Totals By Fiscal Year	**$ 4,359,907**	**$ 319,000**	**$ 1,665,000**	**$ 1,069,000**	**$ 2,857,000**	**$ 1,693,000**	**$ 1,325,000**	**$ 224,000**	**$ 888,000**	**$ 771,000**	**$ 15,170,907**

C. Future Program – Improvements in Services

Needs:

Review of the Stormwater Master Plan Update #3 (May 2019) and through interviews with Town staff, a series of service improvements are necessary to address localized flooding and to improve drainage system performance. To implement such improvements increased funding for routine maintenance and repair of the drainage system as well as increased investment in capital projects is necessary.

The potential changes in services are enumerated below.

1. Structural improvements to the drainage network to enhance volume capacity and water quality protection improvements are limited by lack of dedicated funding that would allow for a proactive maintenance and operations plan. Recent acquisition of asset management software will provide a method to identify priority improvements as well as create tools to do long-range rehabilitation planning for the system. The following are example of improvements needed to the system.

    a. Reduce erosion in swales where vegetation does not grow in a sustainable manner due to tree canopy and lack of sunlight.

    b. Increased flood protection mitigation to reduce incidence of flooding caused by capacity constriction and increased storm event intensity and duration. Some localized flooding occurs; however, certain areas are more prone to heavy flooding and were the subject of the last stormwater Master Plan update. Such flooding may create safety risks for First Responders as well as general public traffic. In the photo to the left, Northwest 166th Terrace is in an active flood condition with vegetative debris adding to the constriction within the drainage system.

NW 83rd Place

c. Reduce performance deficiencies in the drainage network that are currently addressed as funds are made available. Additional resources will reduce overall costs by addressing deficiencies in a timely manner.

2. Improve water quality in the C-8 Canal. As it traverses through Miami Lakes it has been found to be non-compliant with surface water quality criteria for multiple parameters.

3. Improve the response time for requested services by citizens, as documented by calls for assistance to report problem areas. These have increased and cannot be addressed in a timely manner with current funding/staffing resources. It is recommended that the maintenance capabilities for inlet and pipe cleaning be increased, either by establishing a new crew with a new vactor, or by outsourcing to provide a higher level of service. In addition, increasing maintenance and repair budgets for small projects that can be accomplished without major design or construction, will address response time for requested services.

4. Dedicate consistent funding of local match for grant pursuits for capital improvement projects to enable routine pursuit of grants from the State or Federal resources. Grant typically require a local match and annual budgeting for grant-matching funds improves the opportunity of award and allows for long-range grant planning.

5. Increase funding for sweeping program to meet a level of service that addresses both the community's expectation as well as establish a performance goal to meet MS4 permitting requirements. This increase includes additional lane-miles swept as well as potentially increased costs of tipping fees for disposal of materials.

6. Increase funding for general repairs and maintenance to the drainage system to address level of service for catch basin cleaning, including pipe flushing and exfiltration trench cleaning, that optimizes capacity of the system by removal

August 18, 2019 NW 166th Terrace and NW 79th Ave

of leaves and debris. The recommended level of service for catch basin maintenance is once every 12 months; however, the current service level is once every 18 months with known "hot spots" cleaned more frequently.

7. A dedicated a capital reserve within the stormwater utility has not been established, limiting major capital project implementation to available contributions from other restricted revenues funding the Town's CIP and/or award of grants from Federal or State programs. Dedicating resources in a reserve provides the Town with a tool to implement system improvements or new system additions based on priority needs. These funds can be used as a local match for a grant, debt placement costs for bond issuance, or direct funding of a capital improvement. Based on historical experience with grant awards, a dedication of $500,000 a year, appropriated for use on a year by year basis, is recommended.

Future Program [Grab your reader's attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

Building from the current structure of service delivery for management of stormwater and surface water runoff, it is recommended that the Town consider the following improvements. Such changes in level of service target improved performance of the drainage system to protect property and contribute to a sustainable quality of life by reducing flood risk while also enhancing water quality. As noted in the May 2019 Master Plan, these actions address the important role of drainage systems in disposal of stormwater runoff, reduction of risk to property from flooding, reduced pollutant loads from roadways and drainage system components (i.e., catch basins and pipes), and optimization of the performance life of the Town operated infrastructure.

Improvements or Changes in Level of Service:

1. *Increase funding for general repairs to the infrastructure*. These are minor repairs (non-capital projects) that can address immediate improvements, preventing what may be a limited investment now that, if not addressed, will likely cost more as the problem continues to cause system issues. These are preventative actions to delay or prevent further failures. Currently budgeted at $20,000 in FY19-20, it is recommended that the funding be increased to $90,000 in FY20-21. Over time, as the Town expands the asset management data, information on asset age and capacity will assist in determining a need to increase the funding of general maintenance and repairs in future years. Often the adage of "pay me now or pay me later" is appropriate in describing the important of general system maintenance and repair. The "pay me later" is always at a high cost with an aging infrastructure.

2. *Increased performance measures for outsourced sweeping program*. The current street sweeping program is driven by funding available and not performance-based to

ensure the most effective removal of street dirt and debris from curb-line and catch basin grates. The Budget of $35,000 provides for the sweeping of 62.5 lane-miles of major corridors and downtown areas. It is recommended that the program be increased to add 45 lane-miles with an increase in cost of $25,200 for the current contract, bringing the total to $60,200. This approach provides additional support for MS4 permit compliance along with targeted sweeping in areas heavily impacted by the Town's significant tree canopy. The Town can coordinate with the sweeping contractor to identify additional priority areas and/or frequency of sweeping.

3. *Enhance maintenance for Canal C-8 (Biscayne Canal)* which is non-compliant with surface water quality criteria for multiple parameters. The Town works with Miami-Dade County for services related to water quality monitoring and canal cleaning and maintenance. Failure to meet water quality criteria may lead to additional regulatory controls that would mandate action by the Town to reduce/remove the pollutant loading into Canal C-8, likely imposing a timeline for compliance through such measures as development of Total Maximum Daily Load (TMDL), thought of as a pollution diet, for those who discharge into the Canal. These can be quite burdensome, limiting options available to the Town. Proactive measures developed with Miami-Dade County may afford the Town the opportunity to negotiate an effective regulatory strategy, rather than wait to react to a mandate. Increase in professional services funding to engage appropriate technical support to address an action plan for the Canal is in the best interest of the Town to reduce the potential for long-term regulatory requirements.

4. *Increased funding for general maintenance and operation of the drainage system.* Currently the Stormwater Utility supports two full-time staff to clean the catch basins

and pipe network, utilizing a vacuum truck that is 8 years old and will require replacement within the next four years. Currently the performance goal for catch basin cleaning is once every 12 months; however, staff is not able to achieve the goal and catch basins are cleaned every 18 months on average. There are some areas that require twice a year servicing because of consist clogging problems. Pipe flushing and exfiltration trench cleaning are conducted as part of the catch basin program. The Town has a well-established tree canopy that contributes to the demand for increasing the level of service to meet the goal of once every 12 months for routine cleaning. Clogged grates and basins contribute to localized flooding as well as increase pollutant loading to receiving waters, including the canals.

There are two primary options for addressing the increase in service. The Town can hire a two-person team (Driver and assistant driver) and purchase an additional vacuum truck, doubling the resources for the program, providing backup if a truck is down and removing debris in a timely manner. The other approach is to outsource the additional level of service, purchasing the needed resources and allowing for analysis of service performance. Cost-benefit tracking can provide key input on when to bring the service in-house. Outsourcing requires a readily available contractor who will partner with the Town to optimize the service. The Town may want to issue a Request for Interest to see if there are enough competitive options available for outsourcing.

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5. *Pollutant Loading Study for MS4 Permit Compliance*. As noted in the Stormwater Master Plan Update #3, the Town is required to monitor water quality in the canals and prepare a pollutant loading study as part of the MS4 permit issued by the Florida Department of Environmental Protection with Miami-Dade County. To comply, the Town can contract with an outside engineering/environmental firm to prepare this study.

6. *Capital Project Funding Strategy*. The backlog of capital projects continues to grow. Capital projects a typically major repairs to the existing system, with some new additional stormwater drainage components as well. The Town has been successful in obtaining grants through the Federal Emergency Management Administration (FEMA) for mitigation projects as well as Florida State grants. In addition, the Town has been

successful in obtaining legislative support for direct grants to improve system performance.

Capital projects can target both water quantity controls and flood mitigation as well as reduce the sediment loading into canals and ultimately into natural receiving waters and channels. Optimizing performance of the system contributes to the compliance strategies for MS4 permit activities in addition to the rating held by the Town for the National Flood Insurance Program. Multi-objective projects enhance the value of the investment for Miami Lakes.

Several options in addressing the investment strategy for capital projects can be accomplished in the Stormwater Utility.

a. *Dedicated Capital Reserve*: A dedicated reserve for capital projects provides the Town with the flexibility to address emergency repairs without the need to re-budget other priorities.

b. *Appropriated Annual Grant Match:* The Town has demonstrated success in receipt of various grants from the State or Federal programs as well as legislative actions. Dedicating a local match as a budgeted line-item, provides the staff with the flexibility to pursue multiple grants. If a local match is not required in a specific fiscal year, the revenue can be appropriated to the following year for further capital project funding.

c. *Cash-funding Smaller Capital Projects*: The Town can "cash fund" smaller capital projects, setting a threshold each year such as $250,000 so that the Town is not delayed in addressing capital needs. These funds would be appropriated each fiscal year.

d. *Debt-financing*: Some capital projects are significant enough in dollar value that they can be attractive for debt financing, allowing the project to move forward should grants not be available. This provides a more predictable capital project program for management of the drainage system.

D. Financial Analysis

In March 2003, Ordinance 03-31 was adopted to establish a Stormwater Utility and assumed maintenance responsibility from Miami-Dade County for drainage facilities located within the Town boundary. The billing structure was set within the terms of Ordinance 03-31. The rates are based on an Equivalent Residential Unit, defined as 2,800 square feet of impervious area, for the purpose of defining the billing unit structure. Rates are set by separate Ordinance 03-32.

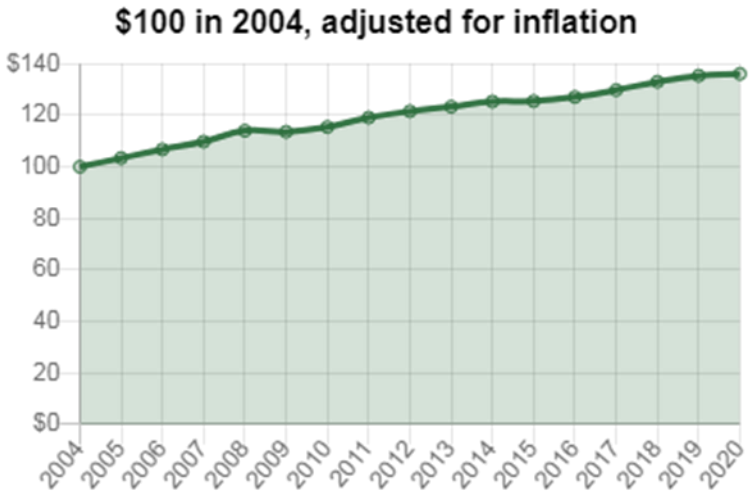
All single family and multi-family dwelling units are charged one (1) ERU or billing. Non-residential developed properties are assigned the number of billing units based on the number of ERU units (2,800sf of impervious area) on the property. If the non-residential property has a partial ERU, it is rounded to the next whole number. The minimum charge to a non-residential property is one (1) ERU.

Ordinance 03-32 set the ERU billing rate at $4.50/month, effective April 1, 2003. The rate has not been adjusted since original adoption. Currently there are 21,155 billing units, generating a net revenue of $1,058,700 annually. (Recent audit and review of accounts identified ERUs that required adjustment to current accounts, and it is not anticipated that this one-time adjustment will occur in the future. Billing units are anticipated to remain constant for purposes of this study.)

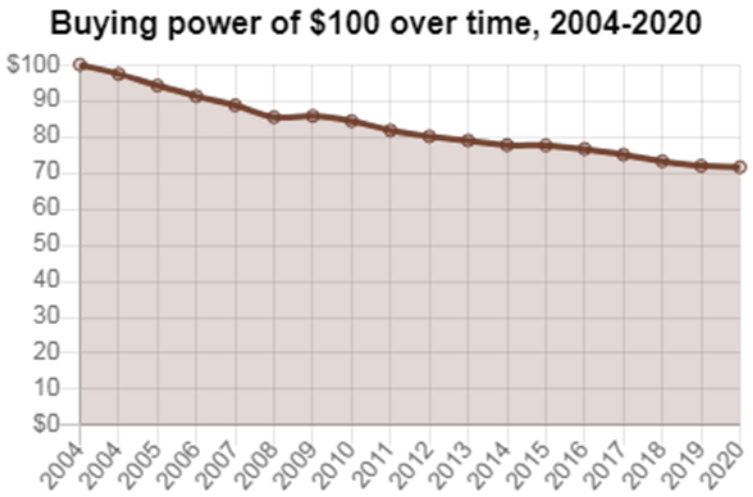
Revenue increases in two ways. Either there is new development and additions of impervious area on current accounts, or rates are increased. Town staff does not anticipate any significant growth in the number of billing units so to address identified resource needs, a rate increase is needed. An audit of accounts was completed to ensure that the number of billing units charge to any one property was accurately captured. That resulted in a slight increase in revenue.

The impact of a stable rate over a long period of time is the loss of purchasing power for the Town's stormwater budget. In graphic 1 below, the Consumer Price Index (CPI) shows that $100 in 2004 is now inflated to $136.04 for the same general purchasing power.

$100 value of goods in 2004 is $136.04 in 2020 based on the national CPI. Based on the regional CPI for Miami FL, it is $145.54. (US Bureau of Labor Statistics)



The buying power of $100 of goods in 2004 is valued at $71 of goods in 2020. (US Bureau of Labor Statistics)



The Town has utilized resources from other restricted funds when needed as well as leveraged available grants for capital funding. A mix of resources is most beneficial for handling strategic investments and one-time purchases. However, routine and consistent level of service to maintain the operational integrity of the drainage system as well as meet Federal and State water quality mandates requires dedicated revenues that provide stable and equitable funding to plan effectively, optimize the system's capacity, and meet community expectations. This rate restudy addresses the routine, on-going services provided by the Town to its residents and businesses. Needs identified by staff require a change in rate and ultimately an increase in total revenue from the user fees to meet those goals.

E. Policies and Options for Rate Update

A rate restudy provides an opportunity to review the various financial policies as well as operational policies that impact the delivery of stormwater management services in the Town. There are several areas that require leadership direction and preference prior to updating the rate structure of the Stormwater Utility.

Operational Policy:

Outsourcing: Miami Lakes uses outsourcing of several key services funded by the Utility. These include street sweeping, canal cleaning and maintenance, and water quality monitoring. Outsourcing is an effective method to manage services that have discrete, quantifiable performance measures that are defined in the terms of a contract or municipal agreement. In addition, outsourcing can be effective when expanding a service provided by Town staff when the growth in service demand exceeds the capacity of staff and other resources (such as equipment). It was noted in the discussion regarding the future program for catch basin and pipe maintenance

that outsourcing may be appropriate in the short-term to evaluate options for additions to staffing and other direct expenditures.

In addition, the Town can partner with engineering/environmental firms to provide one-time studies such as the pollutant loading study mandated by the MS4 permit. Municipal agreements with Miami-Dade County continue to assist in MS4 compliance in canal monitoring and cleaning as well as billing and revenue collection of the Stormwater Utility Fees through the Water and Sewer Department.

Rate Policy:

Several policies should be reviewed to determine optimal revenue generation as well as maximizing the utility resources.

1. Establishment of Operating and Capital Reserves

   Use of reserves within the Utility provides for both operational funding as well as cash availability should an emergency repair be required. Reserves can be accumulated over time, based on factors such as a period to ensure stability in resources or an established annual percentage of total budget (i.e., sixty-day operating reserve or 25% CIP budget reserve). Should the Town choose to issue debt to finance capital projects, a reserve demonstrates stability in the market for bond sales. The rate analysis can demonstrate the timing and impact of reserve contributions in order to evaluate the immediate impacts on the customers of the Stormwater Utility.

2. Use of Debt Financing for Capital Projects

   Major capital projects are designed to address infrastructure improvements that will benefit not only current users and residents of the Town but will enhance and benefit businesses and residents into the future. Debt issued has a longer period of pay-back to recognize that future benefit. A 20-year payback period for stormwater infrastructure projects is routine, with some issuances extending to 30 years. The rate analysis can evaluate the potential impacts of debt issues on the rate and the payback approach.

3. Annual Appropriation of Grant Match – Annual Capital Appropriation

   Establishing an annual appropriation for capital project grant match provides staff with an opportunity to pursue as many grant opportunities as may be available, optimizing the CIP implementation plan and reducing the overall cost burden of capital projects on the Town. If the total appropriation is not expended in one fiscal year, it can be carried forward to the next. The rate analysis includes an appropriation of $500,000 annually for grant pursuits.

4. Rate Stability

As demonstrated by the discussion captured in Section D, maintaining rates at a stable level for a long period of time reduces the purchasing power of the Stormwater Utility. Rate management is an important policy to consider. Options include:

- Floating Rate – rates are adjusted in each budget cycle based on the adopted budget appropriate as well as other financial policies of the Town (e.g., reserve contributions). This approach can cause some confusion with the Utility customer especially for those who have significant charges for their developed impervious area. A floating rate represents year by year costs but may result in changes in rate that require public education and understanding.
- Fixed Rate Adjustments – rates are adjusted annually based on a predetermined value, such as CPI indexing or a specific adjustment set by Ordinance (e.g., 3.5% annually by action of the Council). This approach addresses the erosion of purchasing power based on a specific set value which can be adjusted if necessary, by a method documented in the Ordinance (annually reviewed or adjusted by resolution due to an extraordinary event).
- Fixed Rate for an Established Time – by policy, the Town can establish a period for rate stability with a mandate for a rate restudy codified by Ordinance. This provides the customers of the Utility an expectation for a period of years (e.g., three years with a restudy in year 4). With the establishment of reserves, extraordinary costs can be addressed as needed.

These various policies impact the overall rate analysis and will be reviewed with staff and Town leadership prior to finalization of the rate recommendation.

F. Implementing Changes in Rates

Should the Council choose to increase the rates for the Stormwater Utility or change the rate structure or policies, an amendment via resolution or new ordinance to Ordinance 03-31 and/or Ordinance 03-32 is required. In addition, public education on the program and the need for change is an important step in making such changes. With direction from Town leadership, new documents would be prepared, and publicly noticed according to the requirements of State law, allowing for public review and input prior to adoption. To affect a change for FY20-21, the appropriate steps should be undertaken prior to budget adoption in the fall of 2020.

G. Preliminary Rate Adjustments

Initial rate analysis projects an increase from the current $4.50/month/ERU to address the program adjustments and capital project resources for obtaining grants and/or loans for the projected $15,170,900 Ten-Year program.

The cash demand analysis is used to predict a billing rate per Equivalent Residential Unit (ERU) and includes a series of assumptions for future forecasting of expenditures. These include assumptions on the rate of change of general operating expenses (3% annually), increases in benefits based on past experience and forecast to grow approximately 5% annually, rate of salary adjustments of 2.3% annually, and an overhead charge of 8.5% paid to the General Fund for services supporting the stormwater utility.

The Forecast for Direct Expenditures captures on-going expenses as well as adjustments to address changes in the program, over time. Several key direct expenses are:

- Replacement of the current vator at the end of its useful life (12 years). This cost impacts the depreciation charge each year to ensure that sufficient funds are available upon replacement and is calculated based on the net cost of the unit. The replacement is programmed for FY23-24. With the replacement of the existing unit, the cost of repairs are adjusted down, recognizing a period of warranty and optimal operation of the equipment.
- Addition of a new vator to expand the response capability for the cleaning and maintenance of inlets and pipes; this new vator is programmed for FY22-23. This new unit includes a new cost for maintenance and repair, fuel, insurance costs, and disposal of materials removed from the drainage system.
- Increased investment in the available funds for maintenance and minor repairs to the drainage system. Addressing minor repairs in a more proactive manner may reduce the need for larger capital projects or delay the implementation while grants and loans are pursued.
- Completion of the Pollutant Loading Study mandated by the NPDES MS4 permit.
- Periodic rate study, every four fiscal years, to ensure that rates are adjusted as program needs are identified.
- Recognition that renewal of outsourced services, through contracted procurement, often results in an adjustment in costs to account for inflationary pressures in the marketplace.
- Appropriation of $500,000/annually for capital project planning, engineering design, and grant pursuits.

Summary of Operating Costs (no Capital Projects)

Table G-1 provides a summary by operating cost category for the stormwater program, over the period FY19-20 through FY28-29.

Table G-1 Summary of Operating Expenses by Fiscal Year

Fiscal Year	Direct Expenses	Personnel	Total Operating Cost
FY19-20	$762,561	$ 249,667	$ 1,012,228
FY20-21	$1,299,101	$ 270,188	$ 1,569,288
FY21-22	$1,351,605	$ 279,374	$ 1,630,979
FY22-23	$1,376,088	$ 288,873	$ 1,664,961
FY23-24	$1,464,440	$ 411,982	$ 1,876,421
FY24-25	$1,461,198	$ 422,137	$ 1,883,335
FY25-26	$1,649,622	$ 432,638	$ 2,082,260
FY26-27	$1,669,233	$ 443,496	$ 2,112,730
FY27-28	$1,717,316	$ 454,723	$ 2,172,039
FY28-29	$1,699,653	$ 466,332	$ 2,165,985

Table G-2 summarizes the cash flow analysis and potential rates based on program additions, including a new crew and vactor in FY22-23. Should the Town choose to outsource additional levels of service for the maintenance and cleaning of inlets and pipes, the cost tables will be adjusted. In addition, various policies discussed in Section E, can result in a change in rate recommendations as well.

MIAMI LAKES
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wood.

Table 6-2

Cash Demand Analysis - Miami Lakes Stormwater Management Program Utility - ERU Basis

Line	Cost Category	FY20-21	FY21-22	FY22-23	FY23-24	FY24-25	FY25-26	FY26-27	FY27-28	FY28-29
1	**Expenses - Program Implementation**									
2	Operations	$ 1,397,608	$ 1,459,299	$ 1,493,281	$ 1,704,741	$ 1,711,655	$ 1,980,686	$ 2,081,262	$ 2,156,305	$ 2,165,985
4	***Subtotal***	$ 1,397,608	$ 1,459,299	$ 1,493,281	$ 1,704,741	$ 1,711,655	$ 1,980,686	$ 2,081,262	$ 2,156,305	$ 2,165,985
5	Operating Reserve	$ 139,761	$ 6,169	$ 3,398	$ 21,146	$ 691	$ 26,903	$ 10,058	$ 7,504	$ 968
6	Debt Service	$ 85,840	$ 85,840	$ 85,840	$ 85,840	$ 85,840	$ 15,734	$ 15,734	$ -	$ -
7	***Subtotal Operating Expenses***	$ 225,601	$ 92,009	$ 89,238	$ 106,986	$ 86,531	$ 42,637	$ 25,792	$ 7,504	$ 968
8	***Total Expenditures***	$ 1,623,209	$ 1,551,308	$ 1,582,519	$ 1,811,728	$ 1,798,187	$ 2,023,323	$ 2,107,053	$ 2,163,809	$ 2,166,953
9	**Other Revenues**									
10	Appropriated Fund Balance From Previous Fiscal Year		$ 90,581	$ 163,053	$ 132,156	$ 107,991	$ 121,596	$ 25,878	$ 70,009	$ 13,946
11	Interest Income	$ 12,928	$ 13,499	$ 13,813	$ 15,769	$ 15,833	$ 18,321	$ 19,252	$ 19,946	$ 20,035
12	***Total - Other Revenue***	$ 12,928	$ 104,079	$ 176,866	$ 147,925	$ 123,824	$ 139,918	$ 45,130	$ 89,954	$ 33,982
13	**Net Value - Service Fee Revenue Requirement**	$ 1,610,281	$ 1,447,228	$ 1,405,653	$ 1,663,803	$ 1,674,362	$ 1,883,406	$ 2,061,923	$ 2,073,855	$ 2,132,971
14	**Service Fee Revenue for Operations**	$ 1,610,281	$ 1,537,809	$ 1,568,706	$ 1,795,959	$ 1,782,354	$ 2,005,002	$ 2,087,801	$ 2,143,864	$ 2,146,917
15	***Number of Billing Units***	$ 21,155	$ 21,155	$ 21,155	$ 21,155	$ 21,155	$ 21,155	$ 21,155	$ 21,155	$ 21,155
16	**Recommended Annual Fee per Billing Unit**	$ 80	$ 80	$ 80	$ 90	$ 90	$ 96	$ 102	$ 102	$ 105
17	**Recommended Monthly Fee per Billing Unit**	$ 6.70	$ 6.70	$ 6.70	$ 7.50	$ 7.50	$ 8.00	$ 8.50	$ 8.50	$ 8.75
18	**Projected Total Revenue from User Fees**	$ 1,700,862	$ 1,700,862	$ 1,700,862	$ 1,903,950	$ 1,903,950	$ 2,030,880	$ 2,157,810	$ 2,157,810	$ 2,221,275
19	**Undesignated Revenues**	$ 90,581	$ 163,053	$ 132,156	$ 107,991	$ 121,596	$ 25,878	$ 70,009	$ 13,946	$ 74,358

Notes

Line 2 Operating expenses include all costs except capital projects.
Line 5 Operating Reserve is established in FY20-21 and maintained each year to cover 10% of the operating expenses.
Line 6 Debt Service is an existing cost for MDC SE Utilkity Bond for various projects and Service Charges for NW 57th Dredging Project
Line 10 Unappropriated and undesignated revenue is budgeted for the following fiscal year, carried over to reduce cash demand
Line 11 Interest income is calculated on 1.8% earnings annually on 50% of operating costs
Line 13 New Value - Expenses from Line 7 less Other Revenue from Line 12
Line 15 Number of billing units (no escalation or growth anticipated)
Line 16 Annual fee recommended to cover all expenses and provide a positive fund balance at the end of the fiscal year
Line 17 Montly fee per billing unit