

City of North Miami, Florida

Impact Fee Study



duncan associates

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EXECUTIVE SUMMARY

This impact fee study for the City of North Miami calculates recommended updated fees that could be adopted for general government, police, parks, library, water, and sewer facilities, and a proposed new impact fee for stormwater. The current transportation impact fees will be replaced with a mobility fee, which is addressed in a separate study. This executive summary is followed by chapters on the legal framework, methodology, land use categories, separate chapters on the individual facility types, and appendices.

The City originally adopted impact fees for non-utility fees (e.g., not including water and sewer) in 2010, based on 50% of the fees calculated in a study prepared in 2007.¹ Water and sewer fees by land use type were also adopted in 2010, based on 100% of the amounts calculated in a 2010 memorandum, which in turn was based on calculations for a study based on meter size in 2007.² The fees have not been updated since.

Approach

This project entails assisting the City of North Miami in updating its non-transportation impact fees and developing a proposed new impact fee for stormwater facilities. In addition to the impact fee study, the project includes the preparation of impact fee ordinance amendments to implement the recommendations of the study. Finally, it will include a description of circumstances that reasonably demonstrate that an extraordinary need exists to exceed the limitations on impact fee increases, as provided for in the Florida Impact Fee Act.

Legal Defensibility. The study and ordinance amendments need to be consistent with the Florida Impact Fee Act, as well as the body of Florida impact fee case law known as the “dual rational nexus” test. Key principles from that case law include requirements that (a) the fees are proportional to the impacts of the development, (b) the fees are based on levels of service that are no higher than that currently provided to existing development; and (c) new development does not pay twice for the same level of service, once through impact fees and again through other taxes or fees. Legal issues related to impact fees are discussed in greater detail in the Legal Framework chapter,

Restrictions on Fee Increases. 2021 amendments to the Florida act now place significant restrictions on impact fee increases. Any impact fee rate increase of up to 25% must be phased in over two years, and any increase more than 25% and up to 50% must be phased in over four years. The phased increases must be in equal annual amounts. Impact fees can only be increased once every four years (exclusive of phased increases over two or four years). The separate proportionality requirement means that at the end of the phase-in period, all land uses or meter sizes need to be assessed fees at the same percentage of the maximum fees calculated in the updated impact fee study.

¹ TischlerBise, *Impact Fees for North Miami, Florida*, April 17, 2007

² TischlerBise, *Draft Capacity Fees for North Miami, Florida*, August 2, 2007; TischlerBise memorandum, *Recalculation of Water and Sanitary Sewer Capacity Fees*, January 12, 2010

Consolidated Fee Types. This update recommends including police facilities in the general government fee, and combining parks and libraries in the updated parks and recreation fee. This will give the City more flexibility to spend the impact fee funds on the highest priority needs within these broader fee types.

Simplified Fee Schedules. Fewer and more broadly-defined land use categories in fee schedules will make the classification of new developments easier and reduce the need to assess fees for changes of use, incentivizing the reuse of existing buildings. The current non-utility (general government, police, parks, and library) fee schedules list 22 land use categories that match those used for transportation. The transportation impact fees are being replaced by mobility fees that will have different categories. This update reduces the number of categories to six, as discussed in the Land Use Categories chapter.

The current utility fees (water and sewer) also assess fees by land use, and the fee schedules have 50 distinct land use categories. Some of the fees are based on characteristics that are difficult to determine prior to construction, such as persons, seats, beds, physicians, and kennel cages. The updated utility fees are assessed based on the capacity of the water meter rather than land use type. The City uses eleven different types of water meters that vary by capacity. Assessing the utility fees by meter size will make the fees much easier to determine, while also promoting the reuse of existing buildings.

Non-Utility Impact Fees

The City's current impact fee schedules for parks, libraries, general government, and police facilities are presented in Table 1 (transportation impact fees will be replaced by mobility fees and are not shown). These reflect fees adopted at 50% of the amounts calculated in a study prepared in 2007.

Table 1. Current Non-Utility Impact Fees

Land Use Type	Unit	Parks	Library	Gen. Govt	Police	Total
Single Family Detached	Dwelling	\$4,195.50	\$386.00	\$653.00	\$317.50	\$5,552.00
Multi-Family, Low-Rise (2-19 units)	Dwelling	\$3,074.50	\$282.50	\$478.50	\$232.50	\$4,068.00
Multi-Family, Mid-Rise (20-49 units)	Dwelling	\$2,504.50	\$230.50	\$390.00	\$189.50	\$3,314.50
Multi-Family, High-Rise (50+ units)	Dwelling	\$2,326.00	\$214.00	\$362.00	\$176.00	\$3,078.00
Com / Shop Ctr 25,000 sq. ft. or less	Sq. Foot			\$0.24	\$0.65	\$0.89
Com / Shop Ctr 25,001-50,000 sq. ft.	Sq. Foot			\$0.21	\$0.56	\$0.77
Com / Shop Ctr 50,001-100,000 sq. ft.	Sq. Foot			\$0.18	\$0.47	\$0.65
Com / Shop Ctr 100,001-200,000 sq. ft.	Sq. Foot			\$0.16	\$0.40	\$0.56
Com / Shop Ctr 200,001-400,000 sq. ft.	Sq. Foot			\$0.15	\$0.34	\$0.49
Office / Inst 10,000 sq. ft. or less	Sq. Foot			\$0.33	\$0.24	\$0.57
Office / Inst 10,001-25,000 sq. ft.	Sq. Foot			\$0.30	\$0.19	\$0.49
Office / Inst 25,001-50,000 sq. ft.	Sq. Foot			\$0.29	\$0.17	\$0.46
Office / Inst 50,001-100,000 sq. ft.	Sq. Foot			\$0.27	\$0.14	\$0.41
Medical – Dental Office (Wet Office)	Sq. Foot			\$0.30	\$0.38	\$0.68
Hospital	Sq. Foot			\$0.25	\$0.19	\$0.44
Business Park	Sq. Foot			\$0.23	\$0.14	\$0.37
Light Industrial	Sq. Foot			\$0.17	\$0.08	\$0.25
Manufacturing	Sq. Foot			\$0.13	\$0.04	\$0.17
Warehousing	Sq. Foot			\$0.10	\$0.05	\$0.15
Lodging	Room			\$51.50	\$58.50	\$110.00
Day Care	Student			\$11.50	\$46.50	\$58.00
Nursing Home	Bed			\$26.00	\$24.50	\$50.50

Source: City of North Miami, 50% fee schedule effective November 1, 2010.

Updated maximum impact fees by land use for parks and recreation (which includes libraries) and general government (which includes police) are summarized in Table 2.

Table 2. Updated Non-Utility Impact Fees

Land Use Type	Unit	Parks & Rec.	General Government	Total
Single-Family Det./Att.	Dwelling	\$5,874	\$2,657	\$8,531
Multi-Family	Dwelling	\$3,971	\$1,838	\$5,809
Retail/Commercial	1,000 sq. ft.	n/a	\$4,428	\$4,428
Office	1,000 sq. ft.	n/a	\$2,557	\$2,557
Industrial/Warehouse	1,000 sq. ft.	n/a	\$401	\$401
Public/Institutional	1,000 sq. ft.	n/a	\$1,354	\$1,354

Source: Updated fees from Table 16 (parks) and Table 22 (general government).

Due to the simplification of the land use categories, it is not obvious how to compare the updated non-utility fees with current fees. The comparison is based on the current category that is most comparable to the updated category. The most comparable category for single-family detached/attached is single-family detached, which accounts for over 90% of existing units in the combined category. For the updated multi-family, retail/commercial, and office/institutional categories, the mid-range of building sizes is used. Warehousing is used as the most comparable to the updated industrial/warehouse use. The same office/institutional category used for the updated office category is used for the updated public/institutional category. The comparisons of current and updated fees by land use are shown in Table 3. The biggest percentage increase by land use for each facility type is highlighted.

Table 3. Comparison of Current and Updated Non-Utility Fees

Updated Land Use Type	Comparable Current Land Use Type	Unit	Current Fees		Updated Fees		Percent Change	
			Parks	Gen Govt	Parks	Gen Govt	Parks	Gen Govt
Single-Family Det./Att.	Single Family Detached	Dwelling	\$4,581.50	\$970.50	\$5,874	\$2,657	28%	174%
Multi-Family	Multi-Family, 20-49 units	Dwelling	\$2,735.00	\$579.50	\$3,971	\$1,838	45%	217%
Retail/Commercial	Shop Ctr., 50,001-100,000 sf	1,000 sq. ft.	n/a	\$650.00	n/a	\$4,428	n/a	581%
Office	Office/Inst., 10,001-25,000 sf	1,000 sq. ft.	n/a	\$490.00	n/a	\$2,557	n/a	422%
Industrial/Warehouse	Warehousing	1,000 sq. ft.	n/a	\$150.00	n/a	\$401	n/a	167%
Public/Institutional	Office/Inst., 10,001-25,000 sf	1,000 sq. ft.	n/a	\$490.00	n/a	\$1,354	n/a	176%

Source: Current fees from Table 1 (general government fees per 1,000 sq. ft. are sum of general government and police fees per square foot times 1,000; parks & recreation is sum of parks and libraries); updated fees from Table 2.

Utility Fees

The current water and sewer impact fees are shown in Table 4 on the next page. They are called “capacity fees,” and the fee schedules are codified in the Utilities chapter of the City’s Code of Ordinances, but they are defined in the City’s impact fee ordinance. The capacity fees function just like impact fees and are subject to all the requirements of the Florida Impact Fee Act and the City’s impact fee ordinance. The current sewer fees are 10% higher than the current water fees.

Table 4. Current Utility Impact Fees

Land Use Type	Unit	Water	Sewer	Total
Single-family residences	Dwelling	\$2,226.00	\$2,443.00	\$4,669.00
Apartments	Dwelling	\$1,272.00	\$1,396.00	\$2,668.00
Duplexes or twin home residences	Dwelling	\$1,590.00	\$1,745.00	\$3,335.00
Town residences	Dwelling	\$1,590.00	\$1,745.00	\$3,335.00
Mobile home parks	Dwelling	\$1,908.00	\$2,094.00	\$4,002.00
Adult congregate living	Person	\$636.00	\$698.00	\$1,334.00
Airport	Passenger	\$31.80	\$34.90	\$66.70
Airport	Employee	\$63.60	\$69.80	\$133.40
Banquet halls	Seat	\$159.00	\$174.50	\$333.50
Barbershops	1,000 sq. ft.	\$636.00	\$698.00	\$1,334.00
Bars and cocktail lounges	Seat	\$159.00	\$174.50	\$333.50
Beauty shops	Seat	\$477.00	\$523.50	\$1,000.50
Bowling alleys	Lane	\$636.00	\$698.00	\$1,334.00
Camper or trailer parks	Space	\$954.00	\$1,047.00	\$2,001.00
Car washes (hand type)	Bay	\$6,360.00	\$6,980.00	\$13,340.00
Car washes (recycling type)	Bay	\$4,770.00	\$5,235.00	\$10,005.00
Coin laundries	Washer	\$1,113.00	\$1,221.50	\$2,334.50
Country clubs	Member	\$159.00	\$174.50	\$333.50
Dentist offices	Dentist	\$1,749.00	\$1,919.50	\$3,668.50
Factories (with showers)	1,000 sq. ft.	\$1,272.00	\$1,396.00	\$2,668.00
Factories (without showers)	1,000 sq. ft.	\$636.00	\$698.00	\$1,334.00
Food preparation outlets	minimum	\$2,226.00	\$2,443.00	\$4,669.00
Food preparation outlets	1,000 sq. ft.	\$3,180.00	\$3,490.00	\$6,670.00
Funeral homes	1,000 sq. ft.	\$636.00	\$698.00	\$1,334.00
Gas stations, mini-marts	Each	\$2,862.00	\$3,141.00	\$6,003.00
Health spas, gyms with showers	1,000 sq. ft.	\$2,228.00	\$2,443.00	\$4,671.00
Health spas, gyms w/o showers	1,000 sq. ft.	\$1,272.00	\$1,396.00	\$2,668.00
Hospitals	Bed	\$1,590.00	\$1,745.00	\$3,335.00
Hotels and motels	Room	\$636.00	\$698.00	\$1,334.00
House of worship	Seat	\$19.08	\$20.94	\$40.02
Kennels	Cage	\$190.80	\$209.40	\$400.20
Marinas	Boat Slip	\$254.40	\$279.20	\$533.60
Motor vehicle service stations	1,000 sq. ft.	\$6,360.00	\$6,980.00	\$13,340.00
Nursing or convalescent homes	Bed	\$954.00	\$1,047.00	\$2,001.00
Office buildings	1,000 sq. ft.	\$6,360.00	\$6,980.00	\$13,340.00
Parks (with toilets only)	Person	\$31.80	\$34.90	\$66.70
Parks (with toilets and showers)	Person	\$127.20	\$139.60	\$266.80
Pet grooming	1,000 sq. ft.	\$636.00	\$698.00	\$1,334.00
Pet grooming	Tub	\$477.00	\$523.50	\$1,000.50
Physician offices	Physician	\$1,590.00	\$1,745.00	\$3,335.00
Public swimming facilities	Person	\$63.60	\$69.80	\$133.40
Restaurants (full service)	Seat	\$318.00	\$349.00	\$667.00
Restaurants (full service)	minimum	\$2,226.00	\$2,443.00	\$4,669.00
Restaurants (fast food service)	Seat	\$222.60	\$244.30	\$466.90
Restaurants (fast food service)	minimum	\$2,226.00	\$2,443.00	\$4,669.00
Restaurants (take-out service)	1,000 sq. ft.	\$3,180.00	\$3,490.00	\$6,670.00
Restaurants (take-out service)	minimum	\$2,226.00	\$2,443.00	\$4,669.00

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Table 4. Current Utility Impact Fees (continued)

Land Use Type	Unit	Water	Sewer	Total
Shopping center (dry use)	1,000 sq. ft.	\$318.00	\$349.00	\$667.00
Showrooms	1,000 sq. ft.	\$636.00	\$698.00	\$1,334.00
Stadiums, frontons, ball parks	Seat	\$19.08	\$20.94	\$40.02
Storage or mini warehouses	1,000 sq. ft.	\$31.80	\$34.90	\$66.70
Stores (without food service)	1,000 sq. ft.	\$318.00	\$349.00	\$667.00
Theaters, indoor	Seat	\$19.08	\$20.94	\$40.02
Theaters, outdoor	Car Space	\$31.80	\$34.90	\$66.70
Veterinarian offices	Vet	\$1,590.00	\$1,745.00	\$3,335.00
Veterinarian offices	Cage	\$190.80	\$209.40	\$400.20
Warehouse/industrial spec. bldgs	1,000 sq. ft.	\$127.20	\$139.60	\$266.80

Source: Ord. No. 1311, adopted November 14, 2010.

While the current water and sewer fees are based on land use type, the updated fees are based on water meter size and type. The proposed stormwater impact fees will be assessed per square foot of new impervious cover added by the development. The updated water and sewer impact fees and the proposed stormwater impact fee are summarized in Table 5.

Table 5. Updated Utility Impact Fees

Meter Size (inches)	Meter Type	Water	Sewer
3/4"	Disc	\$9,063	\$1,768
1"	Disc	\$15,135	\$2,953
1.5"	Disc	\$30,179	\$5,887
2"	Disc	\$48,305	\$9,423
1.5"	Turbine	\$96,700	\$18,865
2"	Turbine	\$120,807	\$23,567
3"	Turbine	\$271,884	\$53,040
4"	Turbine	\$604,217	\$117,873
5"	Turbine	\$845,831	\$165,007
6"	Turbine	\$1,208,343	\$235,727
8"	Turbine	\$2,114,623	\$412,527
Potential New Stormwater Impact Fee			
Fee per Sq. Foot of Impervious Cover*			\$0.78

* excluding new impervious cover within public rights-of-way

Source: Updated water fees from Table 34 and sewer fees from Table 40; new stormwater fee from Table 46.

The City does not currently assess a stormwater impact fee. The only comparison that can be made for the water and sewer fees is for the current fee for a single-family unit. Virtually all single-family units use the smallest meter size, which for that reason is referred to as an equivalent dwelling unit (EDU). The comparison is shown in Table 6 on the following page. The percentage change for both facility types are highlighted. The updated water fee is three times higher than the current fee, while the sewer fee is lower. While the potential water fee increase for single-family is substantial, it should be kept in mind that single-family units account for only 8% of new housing units permitted in the last four years (the remainder were multi-family). Larger meters could serve significantly more dwelling units and nonresidential development. The change in the fee for a single-family home is unlikely to be representative of the change for other land use types.

Table 6. Comparison of Current and Updated Utility Fees

	Water	Sewer
Updated Fee per EDU	\$9,063	\$1,768
– Current Single-Family Fee	-\$2,226	-\$2,443
Change from Current	\$6,837	-\$675
Percent Change	307%	-28%

Source: Updated fees from Table 34 (water) and Table 40 (sewer); current fees from Table 4.

Statutory Phasing Schedules

Unless the City prepares an analysis of extraordinary circumstances and adopts updated fees by a super-majority of the governing body, any fees increase must be phased in as required by Florida law. As described in more detail in the Legal Framework chapter, any impact fee increase of no more than 25% must be phased in over two years, and any increase between 25-50% over four years. The increases must be in equal annual increments during the phase-in period. The statutory proportionality requirement means that the impact fee for each land use or meter size must be at the same percentage of the maximum updated fee in the final year of the two-year or four-year phase-in period.

Phasing would be required for general government, parks and recreation, and water impact fees, but not for sewer fees, which are going down, or stormwater fees, which are new. The recommended phasing schedules that comply with these statutory requirements are provided below.

Parks and Recreation

The statutory four-year phasing schedule for the parks and recreation fees is shown in Table 7. The updated fees for both single-family and multi-family are both increasing between 25% and 50%, so a four-year phase-in is required. Both housing types would be at 100% in the fourth year.

Table 7. Parks and Recreation Phasing Schedule

Updated Land Use Type	Unit	Current Fee	Statutory Phasing Schedule				Updated Max. Fee	4th Yr% of Max.	
			Year 1	Year 2	Year 3	Year 4			
Single Family Det./Att.	Dwelling	\$4,581.50	\$4,905	\$5,228	\$5,551	\$5,874	\$5,874	100.0%	
Multi-Family	Dwelling	\$2,735.00	\$3,044	\$3,353	\$3,662	\$3,971	\$3,971	100.0%	
Annual Change									
Single Family Det./Att.	Dwelling	n/a	\$324	\$323	\$323	\$323	n/a	n/a	
Multi-Family	Dwelling	n/a	\$309	\$309	\$309	\$309	n/a	n/a	

Source: Current and maximum fees from Table 3; the fourth-year fee for multi-family, which is increasing the most, is current fee times 1.5; fourth-year single-family fee is updated fee times multi-family fourth-year percentage of updated fee.

General Government

The statutory phasing schedule for general government is shown in Table 8. The updated maximum fees are higher than current fees for all the land uses. The retail/commercial fee is increasing by the highest percentage and would be at 22.0% of its maximum fee after a 50% increase at the end of the four-year phase-in. At that same percentage, only the office fee would also be able to be increased, while the other fees would need to be decreased. It would require an additional 18 years of phasing, for a total of 22 years, to fully implement the updated fees.

Table 8. General Government Phasing Schedule

Updated Land Use Type	Unit	Current Fee	Statutory Phasing Schedule				Updated Max. Fee	4th Yr% of Max.
			Year 1	Year 2	Year 3	Year 4		
Single Family Det./Att.	Dwelling	\$970.50	\$585	\$585	\$585	\$585	\$2,657	22.0%
Multi-Family	Dwelling	\$579.50	\$405	\$405	\$405	\$405	\$1,838	22.0%
Retail/Commercial	1,000 sq. ft.	\$650.00	\$731	\$812	\$893	\$975	\$4,428	22.0%
Office	1,000 sq. ft.	\$490.00	\$508	\$526	\$544	\$563	\$2,557	22.0%
Industrial/Warehouse	1,000 sq. ft.	\$150.00	\$88	\$88	\$88	\$88	\$401	21.9%
Public/Institutional	1,000 sq. ft.	\$490.00	\$298	\$298	\$298	\$298	\$1,354	22.0%
Annual Change								
Single Family Det./Att.	Dwelling	n/a	-\$386	\$0	\$0	\$0	n/a	n/a
Multi-Family	Dwelling	n/a	-\$175	\$0	\$0	\$0	n/a	n/a
Retail/Commercial	1,000 sq. ft.	n/a	\$81	\$81	\$81	\$82	n/a	n/a
Office	1,000 sq. ft.	n/a	\$18	\$18	\$18	\$19	n/a	n/a
Industrial/Warehouse	1,000 sq. ft.	n/a	-\$62	\$0	\$0	\$0	n/a	n/a
Public/Institutional	1,000 sq. ft.	n/a	-\$192	\$0	\$0	\$0	n/a	n/a

Source: Current and maximum fees from Table 3; the fourth-year fee for retail/commercial, which is increasing the most, is current fee times 1.5; fourth-year fee for other land uses is updated fee times retail fourth-year percentage of updated fee.

Water

As noted earlier, the only comparison between current fees based land use type and updated fees based on meter size is the change from the current fee per single-family detached unit and the updated fee for the smallest meter, which is the same as the fee per equivalent dwelling unit, or EDU. That comparison, shown in Table 9, shows that the allowed 50% increase over four years would get the water fees to 36.8% of the updated maximum fee in the fourth year.

Table 9. Water Phasing Schedule for the Smallest Meter

Current Land Use Type	Unit	Current Fee	Statutory Phasing Schedule				Updated Max. Fee	4th Yr% of Max.
			Year 1	Year 2	Year 3	Year 4		
Single Family Det.	Dwelling/EDU	\$2,226	\$2,504	\$2,782	\$3,060	\$3,339	\$9,063	36.8%
% of Maximum Fee by Year		n/a	27.6%	30.7%	33.8%	36.8%	n/a	n/a

Source: Current single-family fee from Table 3; the fourth-year fee is current fee times 1.5.

Because the current fees for other meter sizes cannot be determined, complying with the requirement for equal annual increases is problematic for larger meter sizes and types. There appear to be two reasonable approaches: assess the fees at the fourth-year percentage in the first year and don't increase them for the next three years, or assess them at the same percentages as the smallest meter size each year. The first option runs the risk of the phasing not being completed and the fees for all meters larger than the smallest assessed at a significantly higher percentage, while the second option keeps the fees for all meter sizes proportional throughout the four years, and closely approximates equal annual increases for the smallest meters (2" or smaller), which account for 99.8% of water customers.

The recommended phasing schedule in Table 10 on the following page reflects the second option. Either phasing option would require another ten years of phasing, or a total of 14 years, to increase the fees to 100% of the updated fee amounts.

Table 10. Water Phasing Schedule

Meter Size (inches)	Meter Type	Statutory Phasing Schedule				Updated Max. Fee
		Year 1	Year 2	Year 3	Year 4	
3/4"	Disc	\$2,504	\$2,782	\$3,060	\$3,339	\$9,063
1"	Disc	\$4,182	\$4,646	\$5,110	\$5,576	\$15,135
1.5"	Disc	\$8,338	\$9,264	\$10,190	\$11,119	\$30,179
2"	Disc	\$13,346	\$14,828	\$16,310	\$17,797	\$48,305
1.5"	Turbine	\$26,717	\$29,683	\$32,649	\$35,626	\$96,700
2"	Turbine	\$33,378	\$37,083	\$40,789	\$44,508	\$120,807
3"	Turbine	\$75,118	\$83,458	\$91,798	\$100,168	\$271,884
4"	Turbine	\$166,938	\$185,472	\$204,006	\$222,606	\$604,217
5"	Turbine	\$233,693	\$259,638	\$285,583	\$311,622	\$845,831
6"	Turbine	\$333,851	\$370,916	\$407,981	\$445,179	\$1,208,343
8"	Turbine	\$584,245	\$649,110	\$713,974	\$779,072	\$2,114,623
% of Maximum Fees		27.6%	30.7%	33.8%	36.8%	
Annual Fee Increase						
3/4"	Disc	\$278	\$278	\$278	\$279	n/a
1"	Disc	n/a	\$464	\$464	\$466	n/a
1.5"	Disc	n/a	\$926	\$926	\$929	n/a
2"	Disc	n/a	\$1,482	\$1,482	\$1,487	n/a
1.5"	Turbine	n/a	\$2,966	\$2,966	\$2,977	n/a
2"	Turbine	n/a	\$3,705	\$3,706	\$3,719	n/a
3"	Turbine	n/a	\$8,340	\$8,340	\$8,370	n/a
4"	Turbine	n/a	\$18,534	\$18,534	\$18,600	n/a
5"	Turbine	n/a	\$25,945	\$25,945	\$26,039	n/a
6"	Turbine	n/a	\$37,065	\$37,065	\$37,198	n/a
8"	Turbine	n/a	\$64,865	\$64,864	\$65,098	n/a

Source: Phasing schedule for $\frac{3}{4}$ " meter, percent of maximum fees, and first year increase derived from Table 9; phasing schedule for larger meters based on percent of maximum fees for smallest meter; current fees and first year increases cannot be determined for meter sizes larger than $\frac{3}{4}$ ".

Extraordinary Circumstances

The statute allows the phase-in limitations to be exceeded, based on an analysis that “expressly demonstrates the extraordinary circumstances” that require exceeding them. In addition to a written description of the extraordinary circumstances, two publicly-noticed workshops would need to be held on the issue, and adoption of the ordinance varying from the phasing requirements would require a two-thirds vote of the governing body. The act does not define what would constitute extraordinary circumstances, but appears to leave that determination to a super-majority of the governing body. If extraordinary circumstances are found to exist, the City could adopt updated fees at any percentage up to 100% without a phase-in.

Such an analysis could be prepared for the parks and recreation, general government, and water impact fees. The City could rely on such an analysis to vary from the phasing requirements and adopt the updated parks and recreation, general government, and water fees immediately, without phasing. However, the City would not have to adopt the updated fees at the full amounts, as it would be free to adopt them at a percentage less than 100%, or phase them over time by increasing the percentage of the maximum fees. The most important thing is to assess the fees for all the land use categories at the same percentage of the updated maximum amounts, so that the fees for all types of new development are proportional to the developments’ impacts.

LEGAL FRAMEWORK

Impact fees are a way for local governments to require new developments to pay a proportionate share of the infrastructure costs they impose on the community. In contrast to traditional “negotiated” developer exactions, impact fees are charges that are assessed on new development using a standard formula based on objective characteristics, such as the number and type of dwelling units constructed. The fees are one-time up-front charges, with the payment usually made at the time of building permit issuance. Essentially, impact fees require that each new development project pay its pro-rata share of the cost of new capital facilities required to serve that development.

Since impact fees were pioneered in states like Florida that lacked specific enabling legislation, such fees have generally been legally defended as an exercise of local government’s broad “police power” to regulate land development in order to protect the health, safety and welfare of the community. The Florida courts have developed guidelines for constitutionally-valid impact fees, based on “rational nexus” standards. The standards essentially require that the fees must be proportional to the need for additional infrastructure created by the new development, and must be spent in such a way as to provide that same type of infrastructure to benefit new development. A Florida district court of appeals described the dual rational nexus test in 1983 as follows, and this language was quoted and followed by the Florida Supreme Court in its 1991 St. Johns County decision:

In order to satisfy these requirements, the local government must demonstrate a reasonable connection, or rational nexus, between the need for additional capital facilities and the growth in population generated by the subdivision. In addition, the government must show a reasonable connection, or rational nexus, between the expenditures of the funds collected and the benefits accruing to the subdivision. In order to satisfy this latter requirement, the ordinance must specifically earmark the funds collected for use in acquiring capital facilities to benefit the new residents.

Florida Statutes

The 2006 Florida Legislature passed Senate Bill 1194, which established certain requirements for impact fees in Florida. It was most recently amended by House Bill 337, which was signed by the governor and became effective on June 4, 2021. In March 2024, the Florida legislature passed HB 479, which made additional amendments to the statute, which will become effective on October 1, 2024 if signed by the governor. The full text of the act, codified as section 163.31801, can be found in Appendix E. Mobility fees must also comply with the impact fee act.³

Key provisions of the Florida Impact Fee Act include the following requirements:

- (1) Impact fees must be proportional and be reasonably connected to, or have a rational nexus with, the expenditures of the funds collected and the benefits accruing to the new construction.
- (2) Administrative charges must not exceed actual costs.
- (3) 90 days’ notice must be provided before a new or increased impact fee goes into effect.
- (4) Financial audits must include certification of compliance with the Act.

³ Section 163.3180(5)(i), Florida Statutes: “... A mobility fee-based funding system must comply with s. 163.31801 governing impact fees. ...”

- (5) The burden of proof in any impact fee litigation is on the local government.
- (6) Fees cannot be collected prior to the date of issuance of a building permit.
- (7) Developer contributions must be credited at full market value and transferrable within impact fee zones.
- (8) The value of developer credits must be increased by the same percentage when the applicable type of impact fees for which the credit was given is increased.
- (9) Waivers of impact fees for affordable housing projects, as defined in Sec. 420.9071, do not have to be offset with other government revenues.
- (10) Capital facilities must have a minimum life expectancy of five years (although public safety vehicles are not subject to this restriction).
- (11) Public schools are exempted from the payment of impact fees in Section 1013.371(1)(a).
- (12) Annual financial report must comply with impact fee reporting requirements.

Phasing of Fee Increases

The most significant change made in 2021 was the imposition of restrictions on impact fee increases. Any impact fee increase of no more than 25% must be phased in over two years, and any increase between 25-50% over four years. No fee can go up more than 50% over four years. Annual increases during phasing must be in equal amounts. Aside from annual phasing of increases required by the statute, fees can only be increased once every four years. This rules out annual adjustments to account for cost inflation between fee updates.

The Florida statute also requires that impact fees be proportional to the impact of the development on the need for facilities. A strict application of the proportionality principle would seem to require that the updated fee for all land uses would have to be phased-in at the same percentage of the updated fees for all land use categories each year. This is not possible if the fee for each land use must be increased by the same dollar amount each year. The best that can be done is to have all the land uses at the same percentage of the updated fee in the final year of a two-year or four-year phase-in. Fee decreases are not subject to phasing, and should go into effect in the first year.

In this context, the impact fee rate for the land use that is increasing by the highest percentage determines the percentage of the maximum fees for all land uses in the final year of phasing. For example, suppose one land use category with a current general government fee of \$100 has an updated maximum fee of \$200 (increasing 100%), while all the other land uses also have a current fee of \$100 and an updated fee of \$110 (increasing 10%). At the end of a four-year phase in, the land use with a potential doubling would have increased by \$50, putting it at 75% of its maximum fee, while the fees for all the other land uses would be required to decrease to 75% of their maximum fee of \$110, or \$82.50 – this would be a decrease of \$17.50 or 17.5%. It would take another four-year phase-in period to get all the land uses to the full updated fee amounts.

It is not clear whether the legislature fully understood these implications when adopting this amendment to the statute. The bill proposing the phasing requirements was filed in reaction to an impact fee being increased to a higher percentage of the calculated maximum fees. In that case, all the current fees were already proportional to the maximum fees, and the land use categories were not changing.

The statute allows the phase-in limitations to be exceeded, based on an analysis that “expressly demonstrates the extraordinary circumstances” that require exceeding them. In addition to a written description of the extraordinary circumstances, two public workshops would need to be held on the issue within twelve months prior to ordinance adoption, and adoption would require a two-thirds vote of the governing body. The act does not define what would constitute extraordinary circumstances, but appears to leave that determination to a super-majority of the governing body. If extraordinary circumstances are found to exist, the City could adopt updated fees at any percentage up to 100% without a phase-in, or phase in the fees using a different schedule.

General Impact Fee Principles

The Florida Impact Fee Act provides relatively little guidance on how impact fees are to be calculated, other than invoking phrases drawn from Florida case law, such as “proportional and reasonably connected to” and having “a rational nexus with.” Our understanding of the principles arising from that case law and their application to impact fee calculations are described here. This discussion focuses on when revenue credits should be provided for future revenue that will be generated by or otherwise attributable to new development. Under what circumstances revenue credits are warranted is one of the murkiest areas of impact fee law.

Deficiencies. One of the most fundamental principles arising out of case law is that impact fees should not charge new development for a higher level of service than is provided to existing development. While impact fees can be based on a higher level of service than the one existing at the time of the adoption of the fees, two things are required if this is done. First, another source of funding other than impact fees must be identified and committed to fund the capacity deficiency created by the higher level of service. Second, the impact fees must generally be reduced by a revenue credit to ensure that new development does not pay twice for the same level of service, once through impact fees and again through general taxes that are used to remedy the capacity deficiency for existing development. In order to avoid these complications, the general practice is to base the impact fees on the existing level of service.

Debt. As noted above, if impact fees are based on a higher-than-existing level of service, the fees should be reduced by a revenue credit that accounts for the contribution of new development toward remedying the existing deficiencies. A similar situation arises when the existing level of service has not been fully paid for. Outstanding debt on existing facilities that are counted in the existing level of service will be retired, in part, by revenues generated from new development. Given that new development will pay impact fees to provide the existing level of service for itself, the fact that new development may also be paying for the facilities that provide that level of service for existing development could amount to paying for more than its proportionate share. Consequently, impact fees should be reduced to account for future payments that will retire outstanding debt on existing facilities. Outstanding capital lease payments and outstanding developer credits for facilities or equipment counted in the existing level of service are similar to debt obligations and also warrant a revenue credit.

Local Funding. While the need to provide revenue credits for existing deficiencies and outstanding debt is clear, the issue is much less clear when it comes to other types of revenue that may be used to make capacity-expanding capital improvements of the same type being funded by impact fees. For example, credits are sometimes provided based on the historical use of local non-impact fee funding for projects that are impact fee-eligible. The rationale for such credits has not been well-articulated and is not specifically addressed in impact fee case law. Capacity-adding projects that may be funded in the future with local non-impact fee funds will be paid for by both existing and new development, and will increase the overall level of service, benefiting both existing and new development. Such a credit essentially amounts to a subsidy of new development's obligation to pay its fair share of the cost to maintain the existing level of service. Providing such a credit makes it more difficult to raise the overall level of service, as future non-impact fee funding will be necessary to offset lower impact fee revenue resulting from the credit. Providing a credit for local funding would seem to assume that the local government intends for the funding to subsidize new development's share of the cost to maintain the existing level of service, rather than to increase the level of service for the community as a whole. In the absence of such a declaration of the governing body's intent, no credit appears to be warranted for local funding, and is not provided in this study.

Grants. Another source of non-impact fee funding is grants from other government entities. Grant funding, like local funding, tends to increase the level of service, which benefits both existing and new development, and unlike local funding, any payment by new development in the future is indirect and not allocated proportionately to taxes paid by development in the community. However, credit for grant funding has often been provided in impact fee studies in Florida, commonly based on the amount of funding received for capacity improvements over the last five years and assuming that the recent funding trend will continue over the long term. In addition, it can be argued that previous grant funding has helped to create the existing level of service, and a credit should be provided to put new development on an equal footing with existing development in terms of the percentage of capital improvements paid for with grant funding. This study provides a revenue credit for potential future grant funding paid for or attributable to new development based on recent funding trends.

METHODOLOGY

In impact fee analysis, disparate types of development must be translated into a common unit of demand, such a population for parks or gallons per day for water. This unit of measurement is called a “service unit.” A wide range of methodologies have been developed to calculate the cost per service unit in impact fee studies, consistent with the legal requirements and guidelines described above. Despite variations, there are two primary types of methodologies, which can be referred to as “standards-based” and “plan-based.”

Standards-based methodologies use a system-wide level of service standard, such as the number of park acres per 1,000 residents, or the existing capital investment per service unit. Plan-based methodologies rely on a long-range master plan to establish the nexus between the cost of planned improvements and the projected growth over a defined time period. The cost per service unit is calculated by dividing the planned costs by the projected growth in demand. In general, a plan-based approach requires a master plan update when planned projects change.

This study uses the standards-based approach. This approach does not require that there be a master plan, or even a list of specific planned projects that will be funded with the impact fees.

There are two major variants of the standards-based methodology: “incremental expansion” and “consumption-based.” The incremental expansion variant is the most commonly-used for facilities for which capacity cannot be readily quantified. The basic idea is that the system of capital facilities will need to be expanded proportionally with the increase in demand to maintain the system-wide ratio of facility replacement cost to demand. Replacement cost is the current cost to acquire or construct current capital assets.

The consumption-based variant is used in cases where capacity can be measured and there is a significant amount of excess capacity. This approach is most often used to determine the cost per service unit for utility treatment plants. Rather than dividing the total replacement cost of the plant by total existing demand, the replacement cost is divided by its capacity. This variant is not used in this study, because the City’s existing water treatment plant does not have any excess capacity.

Most often, the incremental expansion methodology uses the actual level of service (LOS) that exists at the time the study is prepared. This LOS standard can be expressed in terms of a physical ratio (e.g., park acres per 1,000 population), or in dollar terms (e.g., general government replacement cost per functional person). The basic assumption is that it will be necessary to expand capital facilities proportional to growth. Basing the fees on the existing LOS assumes that there is little or no excess capacity in existing facilities to accommodate future growth. However, an incremental expansion methodology can also be based on a LOS that is lower than the current existing LOS (e.g., when there is a significant amount of unoccupied space in a new administration building).

In summary, this study uses the standards-based “incremental expansion” methodology. The plan-based approach requires a current master plan that identifies the improvements that will be needed to serve anticipated development over a long term, such as 20 years. The standards-based approach allows the City to adjust its capital improvements plan to respond to changing development patterns without triggering the need for an impact fee and master plan update.

LAND USE CATEGORIES

This chapter discusses the land use categories used in the updated impact fee schedules for general government and parks and recreation facilities. The definitions of the land use categories to be included in the service unit demand schedules and the impact fee schedules have important implications for the fees assessed on different land uses and the ease or difficulty of impact fee administration.

The current impact fee schedules for general government/police and parks/libraries have four residential and 18 nonresidential land use categories. An alternative approach is to simplify the fee schedules by eliminating some of the uses and replacing them with a smaller number of broader, more generalized categories.

There are several advantages to this approach: (1) it may better reflect the long-term use of the development; (2) it will make it easier to classify proposed development; and (3) there will be fewer changes of use or independent fee calculation studies. The primary motivation for including many nonresidential categories is to have the fees more accurately reflect the impact of the development. While this may be true for the initial occupant of the structure, many nonresidential buildings can accommodate a variety of more specialized uses that can change over time. A broader category may be more reflective of the long-term impacts of the development, while reducing the need to assess fees for future changes of use and incentivizing the reuse of existing buildings. Paradoxically, having more land use categories often makes it more difficult to classify proposed development projects.

This study recommends reducing the number of land uses from 22 to six – single-family detached and attached, multi-family, retail/commercial, office, industrial/warehouse, and public/institutional. These are discussed below.

Residential Categories

The general government and parks and recreation fees calculated in this study for residential land uses are based on the average number of persons residing in the unit.

Single-Family Detached/Attached. This category represents a combination of the current single-family detached category and single-family attached units (townhouses), which are currently included in the multi-family category. The primary reason for this change is that local census data on the number of persons in the unit is only available for the combined category.

Multi-Family. The current three multi-family categories are differentiated by the number of units in the building (less than 20, 20-49, and 50 or more), while the proposed category would include all multi-family units. Again, the reason for this proposed change is that local census data on household population is not available by these categories (it is only available for 2-4 or 5 or more units). This category does not include townhomes, which are included in the single-family detached/attached category.

Nonresidential Categories

Parks and recreation fees are not assessed on nonresidential development. The general government fees are based on functional population, which represents the average number of equivalent persons occupying the building during a typical weekday. This is estimated based on a number of factors, including trip generation rates, average vehicle occupancy by trip purpose, employee density, and average hours spent at the site by employees and visitors. While trip generation rates are only one component used in calculating the demand of various nonresidential uses on general government facilities, they are an important one and the focus of the following discussion.

Retail/Commercial. Most commercial uses occur within shopping centers, and trip generation rates for shopping centers reflects a mix of uses. The ITE *Trip Generation Manual* notes that some of the centers in its surveys include “non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs and recreational facilities.” It also notes that some of the centers surveyed include outparcels, which often contain service stations, drive-in banks and fast-food restaurants. The proposed approach is to utilize the shopping center rate for all retail/commercial uses, which avoids charging a higher fee for the same use if it is located outside a shopping center.

The current general government fee schedule includes five shopping center categories ranging from up to 25,000 square feet to 400,000 square feet or more. The most recent ITE manual has three size categories, ranging from up to 40,000 square feet to more than 150,000 square feet. This study uses the largest size category, which has the lowest shopping center trip generation rate. The category also includes hotel and motel uses, for which the ITE manual only provides trip rates per room.

Office. Current office/institutional categories are based on the size of the building, using four square footage categories (ranging from up 10,000 square feet to more than 50,000 square feet). The current ITE manual provides only an average trip rate. This study recommends collapsing the size categories and charging office uses based on the average trip rate per 1,000 square feet. Medical offices have a higher trip generation rate, but are often located in buildings with a mix of general and medical offices. Medical office uses are included in the office category. Hospitals are also included, as they have a trip rate virtually identical to a general office building. This category also includes institutions of higher education and technical schools, for which trip generation rates are not available from the ITE manual.

Industrial/Warehouse. The current general government fee schedule includes four land uses that are proposed to be included in a single category: business park, light industrial, manufacturing, and warehousing. Warehouse uses account for about 65% of the total industrial/warehouse square footage in North Miami, and that is the trip rate used for this category.

Public/Institutional. This category encompasses a variety of governmental, quasi-public, and institutional uses, including elementary and secondary schools, day care centers, nursing homes, churches, libraries, and fire and police stations. Rather than attempt to list all such uses that don’t fit into the other five proposed categories, they are included into this broad category. The current fee schedule lists only two such uses: day care and nursing home. The fees are based on the trip rate for nursing homes, which is the lowest of the included categories.

Comparison of Land Use Categories

The current and proposed land use categories for the general government impact fees are summarized in Figure 1 below. The parks and recreation fees are assessed only on the residential categories.

Figure 1. Current and Proposed Land Use Categories

<u>Existing Categories</u>		<u>Proposed Categories</u>	
<u>Land Use Type</u>	<u>Unit</u>	<u>Land Use Type</u>	<u>Unit</u>
Single Family Detached	Dwelling	Single Family Det./Att.	Dwelling
Multi-Family, Low-Rise (2-19 units)	Dwelling		
Multi-Family, Mid-Rise (20-49 units)	Dwelling	Multi-Family	Dwelling
Multi-Family, High-Rise (50+ units)	Dwelling		
Lodging	Room		
Com / Shop Ctr 25,000 sq. ft. or less	Sq. Foot		
Com / Shop Ctr 25,001-50,000 sq. ft.	Sq. Foot		
Com / Shop Ctr 50,001-100,000 sq. ft.	Sq. Foot	Retail/Commercial	1,000 sq. ft.
Com / Shop Ctr 100,001-200,000 sq. ft.	Sq. Foot		
Com / Shop Ctr 200,001-400,000 sq. ft.	Sq. Foot		
Office / Inst 10,000 sq. ft. or less	Sq. Foot		
Office / Inst 10,001-25,000 sq. ft.	Sq. Foot		
Office / Inst 25,001-50,000 sq. ft.	Sq. Foot	Office	1,000 sq. ft.
Office / Inst 50,001-100,000 sq. ft.	Sq. Foot		
Medical – Dental Office (Wet Office)	Sq. Foot		
Hospital	Sq. Foot		
Business Park	Sq. Foot		
Light Industrial	Sq. Foot		
Manufacturing	Sq. Foot	Industrial/Warehouse	1,000 sq. ft.
Warehousing	Sq. Foot		
Day Care	Student		
Nursing Home	Bed	Public/Institutional	1,000 sq. ft.

Land Use Definitions

Definitions for the land use categories used in this study are provided below. These definitions are intended to assist City staff in classifying proposed developments and assessing appropriate impact fees. If these definitions are adopted by ordinance or resolution, they should be accompanied by a disclaimer that they only apply to interpretation of the impact fee schedules.

Single-Family Detached/Attached means a building containing only one dwelling unit, or one of multiple units attached on one or both sides to other units and separated by a wall that separates the units from the ground through the roof, also referred to as a townhome.

Multi-Family means a building containing two or more dwelling units, excluding single-family attached (townhome) units. It includes duplexes, apartments, and residential condominiums.

Retail/Commercial means an integrated group of commercial establishments planned, developed, owned or managed as a unit, or a free-standing retail or commercial use. A retail or commercial use shall mean the use of a building or structure primarily for the sale to the public of nonprofessional services, or goods or foods that have not been made, assembled or otherwise changed in ways generally associated with manufacturing or basic food processing in the same building or structure. This category includes, but is not limited to, all uses located in shopping centers and the following typical types of free-standing uses: amusement park, bank, camera shop, car wash, convenience store, department store, discount store, florist shop, golf course or driving range, health or fitness club, hobby, toy and game shop, hotel or motel, laundromat, laundry or dry cleaning, lawn and garden supply store, marina, massage establishment, movie theater, music store, newsstand, racetrack, recreation facility (commercial), restaurant, service station, specialty retail shop, used merchandise store, variety store, and vehicle and equipment rental.

Office means a building exclusively containing establishments providing executive, management, administrative, financial, medical or professional services, and which may include ancillary services for office workers, such as a restaurant, coffee shop, newspaper or candy stand, or childcare facilities. It may be the upper floors of a multi-story office building, excluding ground floor retail uses. Typical uses include real estate, insurance, property management, investment, employment, travel, advertising, secretarial, data processing, telephone answering, and telephone marketing offices; medical offices and hospitals; institutions of higher education; technical schools; music, radio and television recording and broadcasting studios; professional or consulting services in the fields of law, architecture, design, engineering, accounting and similar professions; interior decorating consulting services; and business offices of private companies, utility companies, trade associations, unions and nonprofit organizations. This category does not include an administrative office that is ancillary to a different primary use of the site.

Industrial/Warehouse means any of the following:

Industrial - a facility primarily intended for the production or assembly of goods, processing of foods, mining of raw materials, or similar activities. Typical uses include factories, welding shops, wholesale bakeries, and utility plants.

Warehouse - an establishment primarily engaged in the display, storage and sale of goods to other firms for resale, as well as activities involving significant movement and storage of products or equipment. Typical uses include wholesale distributors, storage warehouses, moving and storage firms, trucking and shipping operations and major mail processing centers.

Mini-warehouse - an enclosed storage facility containing independent, fully enclosed bays that are leased to persons for storage of their household goods or personal property.

Public/Institutional means a governmental, quasi-public or institutional use, not located in a shopping center or separately included in other land use categories. Typical uses include day care centers, elementary and secondary schools, nursing homes, churches, prisons, city halls, courthouses, post offices, jails, libraries, fire stations, museums, military bases, airports, bus stations, cemeteries, and parks.

PARKS AND RECREATION

The City of North Miami currently assesses separate impact fees for parks and libraries. The updated parks and recreation fee addresses both types of facilities. Both fees are assessed only on residential development and are assessed based on the average number of persons residing in a dwelling unit by housing type. Both offer recreational opportunities to residents (parks offer more than active recreation, especially in community centers).

Existing City parks and recreation facilities include a park administrative building, a library with an extensive collection of circulation materials, and a wide variety of parks, open space, and other recreational facilities. The locations of existing parks and parkland are illustrated in Figure 2 on the following page.

This chapter updates the cost attributable to new residential development to maintain the City's current parks and recreation level of service. To make the fee calculations easier to follow, numbers in tables that are inputs into other tables are highlighted in **red**.

Service Units

Disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for park facilities. This unit of measurement is called a "service unit." The most obvious and commonly-used measure of demand for park facilities is residential population. This can be expressed either in terms of average household size (persons per occupied unit/household) or persons per total unit (including currently vacant units).

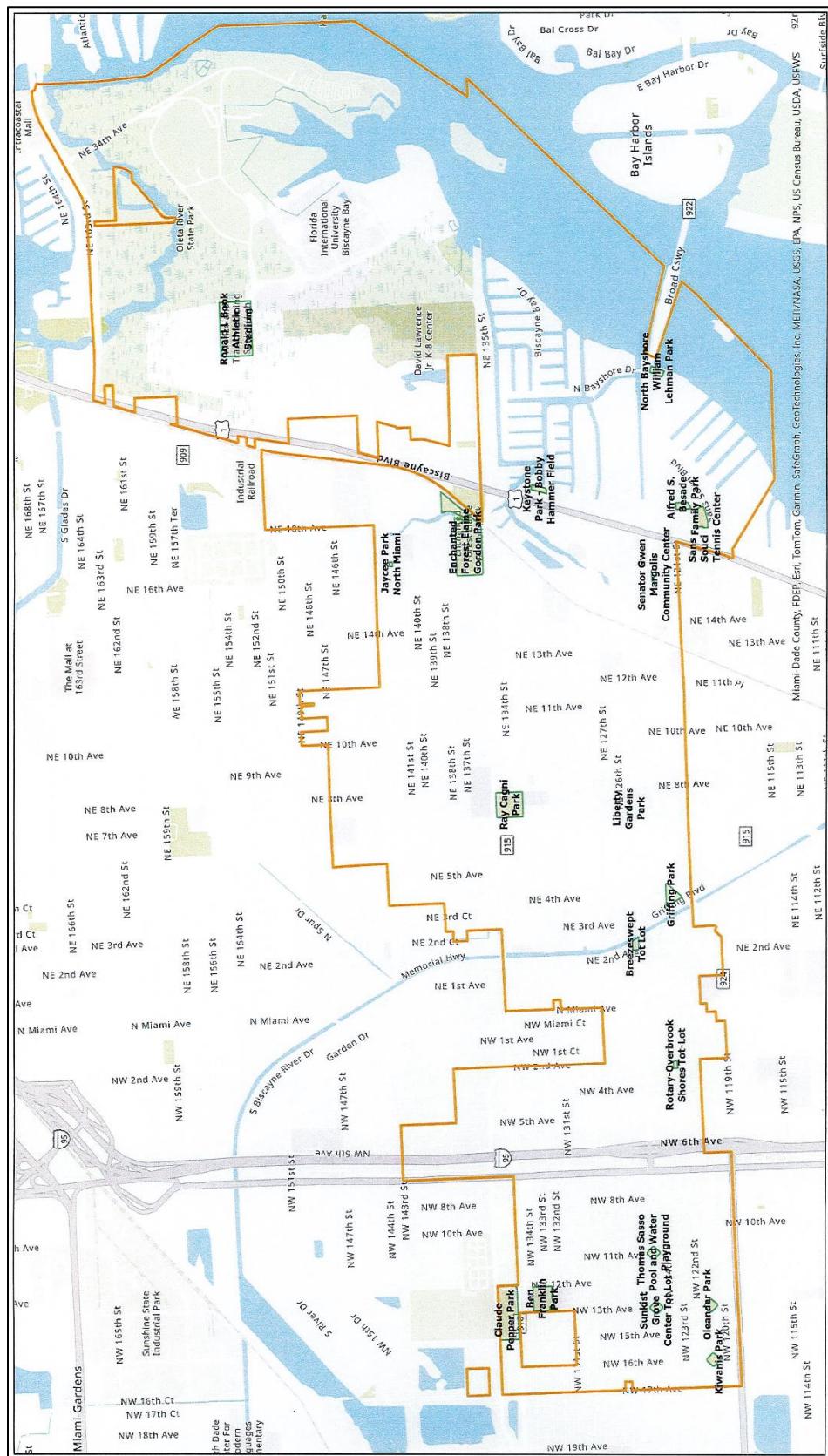
This report uses a relative measure based on persons per unit called the "equivalent dwelling unit" or EDU. One EDU represents the impact of a typical single-family detached dwelling. Other types of units each represent a fraction of an EDU, based on their relative number of persons per unit. The number of EDUs per dwelling unit by housing type and the number of total existing service units are calculated in Table 11.

Table 11. Existing Park and Recreation Service Units

Housing Type	Persons per Unit	EDUs per Unit	Existing Units	Existing EDUs
Single-Family Det./Att.	3.30	1.00	9,029	9,029
Multi-Family	2.23	0.68	14,415	9,745
Mobile Home	2.20	0.67	206	137
Total Existing EDUs			23,650	18,911

Source: Persons per unit from Table 49 in Appendix B; EDUs per unit is ratio of persons per unit by housing type to persons per unit for a single-family unit; existing units from Table 47 in Appendix A; existing EDUs is existing units times EDUs per unit.

Figure 2. Park Locations



Cost per Service Unit

This study bases the parks and recreation impact fee on the existing level of service, and measures that level of service in terms of the ratio of the total replacement value of existing facilities to existing service units. The replacement values of existing parks and library improvements and land are based on insured values and property tax appraisals, and are summarized in Table 12.

Table 12. Existing Parks and Recreation Facility and Land Values

Park and Recreation Facility	Address	Acres	Land Value	Imp. Value
Parks Division Office/Warehouse	12185 NE 12 Court	2.82	\$1,029,200	\$1,689,900
Library	835 NE 132 Street	2.55	\$5,559,600	\$7,831,437
Alfred Besade Park	11825 NE 19 Drive	1.60	\$2,005,680	\$110,167
Arch Creek East Envir. Preserve	2699 NE 135 Street	131.87	\$18,342,027	n/a
Ben Franklin Park	13400 NW 12 Avenue	6.88	\$3,566,348	\$464,345
Breezeswept Tot-Lot	12501 NE 2 Avenue	1.01	\$807,100	\$54,073
Buccaneer Park	690 NE 145 Street	0.32	\$276,210	n/a
Cagni Park	13498 NE 8 Avenue	8.73	\$12,196,800	\$222,226
Claude Pepper Park	1255 NW 135 Street	29.20	\$931,095	\$1,694,841
Enchanted Forest Elaine Gordon Park	1725 NE 135 Street	22.00	\$12,757,110	\$1,462,786
Good Neighbor Stormwater Park	901 NE 144 Street	0.41	\$145,921	n/a
Griffing Community Center	12220 Griffing Boulevard	5.40	\$6,510,000	\$563,740
Jaycee Park	14195 NE 16 Court	0.34	\$133,729	n/a
Joe Celestin Community & Rec. Center	1525 NW 135 Street	3.20	\$198,634	\$10,800,000
Keystone Community Center	13050 Ixora Court	1.39	\$2,128,400	\$471,271
Kiwanis Park/Judsen Comm. Center	12100 NW 16th Ave	1.55	\$804,440	\$484,286
Liberty Gardens Park	715 NE 125 Street	0.04	\$189,000	n/a
North Bayshore William Lehman Park	12220 North Bayshore Drive	1.46	\$1,712,690	\$723,643
North Miami Athletic Stadium	25555 NE 151 Street	20.00	\$3,858,343	\$3,344,234
North Miami Library Tot-Lot	835 NE 132 Street	0.39	\$848,101	n/a
North Miami Tot-Lot	305 NW 136 Street	0.10	n/a	n/a
Oleander Park	12100 NW 13 Avenue	1.55	\$804,400	n/a
Penny Sugarman Tennis Center	1795 Sans Souci Boulevard	2.75	\$2,005,800	\$687,223
Rotary Overbrook Shores Tot-Lot	200 NW 123 Street	0.37	\$522,720	\$8,455
Thomas Sasso Pool	1100 NW 125 Street	2.00	\$804,440	\$1,362,563
Sunkist Grove Community Center	12500 NW 13 Avenue	1.21	\$804,440	\$751,850
Total		249.14	\$78,942,228	\$32,727,040

Source: Parks and library buildings, park names, addresses, and acres from City of North Miami, 2024; land value based on Miami-Dade Property Appraiser records; improvement value from City's statement of insured values or Property Appraiser records.

The replacement value of the existing library collection is determined based on the current cost of new acquisitions. The replacement value of the current circulation materials is calculated in Table 13 on the following page.

Table 13. Library Collection Materials Value

Type of Material	No. of Items	Unit Cost	Total Value
Book	48,214	\$25.14	\$1,211,978
Juvenile Book	30,868	\$15.04	\$464,374
DVD	2,678	\$17.09	\$45,769
audiobook CD	2,063	\$28.17	\$58,118
Magazines	1,463	\$5.26	\$7,699
Hotspots	131	\$345.00	\$45,195
Laptops	39	\$1,200.00	\$46,800
Total Circulation Materials Value			\$1,879,933

Source: City of North Miami Library, February 21, 2024.

Dividing the total replacement value of existing parks and library buildings, other improvements, land and circulation materials by the number of park service units results in a cost of \$6,004 per equivalent dwelling unit (EDU) to maintain the current parks and recreation level of service, as shown in Table 14

Table 14. Parks and Recreation Cost per Service Unit

Land Value	\$78,942,228
Building and Improvement Value	\$32,727,040
Library Collection Value	\$1,879,933
Total Existing Replacement Value	\$113,549,201
÷ Existing Service Units (EDUs)	18,911
Cost per Service Unit	\$6,004

Source: Land and improvement value from Table 12; library collection value from Table 13; existing park service units (EDUs) from Table 11.

Net Cost per Service Unit

As described in the Legal Framework chapter, impact fees should be reduced to account for new development's contribution toward the cost of remedying existing deficiencies, retiring outstanding debt for existing facilities that are included in the existing level of service on which the fees are based, and State/Federal grants. The parks and recreation fees calculated in this study are based on the existing level of service, so there are no deficiencies. The City does not have any outstanding debt on existing facilities, and it has not received any grant funding for parks and recreation improvements in the last five years.

However, there are outstanding developer credits for park improvements made by the SoLe Mia development, which function much like debt. The most straightforward way to account for this future obligation is to divide it by existing service units, which places new development on a level playing field with existing development in terms of the cost funded with future obligations. The net cost per service unit is calculated in Table 15.

Table 15. Parks and Recreation Net Cost per Service Unit

Outstanding Developer Credits	\$2,451,521
÷ Existing Service Units (EDUs)	18,911
Developer Credit per Service Unit	\$130
Cost per Service Unit (EDU)	\$6,004
– Developer Credit per Service Unit	-\$130
Net Cost per Service Unit	\$5,874

Source: Outstanding developer credits for park improvement completed for the SoLe Mia development from Oleta Partners request for credits, November 11, 2024; existing park service units (EDUs) from Table 11.

Net Cost Schedule

The maximum parks and recreation impact fees that can be adopted by the City based on this study are derived by multiplying the number of service units (EDUs) associated with each dwelling unit type by the net cost per EDU. The updated maximum park fees are shown in Table 16. For a comparison with current fees, see the Executive Summary.

Table 16. Parks and Recreation Net Cost Schedule

Housing Type	EDUs per Unit	Net Cost per EDU	Net Cost per Unit
Single-Family Det./Att.	1.00	\$5,874	\$5,874
Multi-Family	0.68	\$5,874	\$3,971

Source: EDUs per unit from Table 11; net cost is cost per EDU from Table 14.

GENERAL GOVERNMENT

The City currently assesses separate impact fees for general government and police facilities. This update includes both of these facility types in a more comprehensive general government impact fee. To make the fee calculations easier to follow, numbers in tables that are inputs into other tables are highlighted in red.

General government includes a variety of facilities that benefit both residential and nonresidential development, such as city administrative offices and public works yards, but excludes transportation, water, sewer, and stormwater. The updated general government fee includes police facilities, which also benefits residential and nonresidential development. The police department building is located in the city hall complex that contains most of the other general government facilities. The City is actively considering constructing a new multi-story civic center building that would house both the city hall and police station. Combining the two types of impact fees will give the City more flexibility in the expenditure of the impact fee revenues.

Service Units

In impact fee analysis, disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for new facilities. This unit of measurement is called a service unit. One of the most widely-used ways to measure the demand for general government facilities is known as “functional population.” Functional population represents the equivalent persons present at the site of a land use during a typical weekday. It is further described and calculated in Appendix C. The functional population multipliers by land use and total functional population are summarized in Table 17.

Table 17. General Government Service Units

Land Use type	Unit	Existing Units	Func. Pop./Unit	Functional Population
Single-Family Det./Att.	Dwelling	9,029	1.59	14,356
Multi-Family	Dwelling	14,415	1.10	15,857
Mobile Home	Dwelling	206	1.23	253
Retail/Commercial	1,000 sq. ft.	5,087	2.65	13,481
Office	1,000 sq. ft.	2,378	1.53	3,638
Industrial/Warehouse	1,000 sq. ft.	2,813	0.24	675
Public/Institutional	1,000 sq. ft.	2,973	0.81	2,408
Total				50,668

Source: Existing 2024 units from Table 47 (residential) and Table 48 (nonresidential) in Appendix A; functional population per unit from Table 51 (residential) and Table 52 (nonresidential) in Appendix C; functional population is existing units times functional population per unit.

Cost per Service Unit

The general government impact fee is based on the existing level of service. The level of service used in developing the impact fees in this study is the ratio of the replacement value of existing facilities and equipment to the total service units in the city.

Most of the existing general government facilities are located on three adjoining City-owned parcels which comprise the main government complex. Buildings include city hall, the police department, the Museum of Contemporary Art (MOCA), and offices for planning and community development, building and zoning (B&Z), neighborhood services, and housing and social services. A composite map from the property appraiser's parcel search tool in Figure 3 illustrates the parcels of land and buildings on the site. The other general government sites are the Motor Pool facility that houses the aerial operations, fleet, streets, and stormwater divisions, and the Utility Operations Center (UOC), which houses the administrative offices and warehouses of the water and sewer division.

Figure 3. Government Complex Map



The replacement cost of general government buildings in the government complex is based on the estimated construction cost per square foot to construct a new city hall/police building. It excludes costs related to a planned parking structure, site work, design, project management, construction contingency, and furniture, fixtures, and equipment. The replacement cost of the motor pool and UOC buildings, which mostly consist of warehouses, are estimated at \$150 per square foot. Land replacement values are based on appraised values from the Miami-Dade Property Appraiser.

The current replacement cost of general government buildings and land totals \$75.2 million, as shown in Table 18.

Table 18. General Government Facility and Land Cost

Buildings and Land	Unit	Number	Unit Cost	Total Cost
City Government Complex, 776 NE 125 St				
City Hall	Sq. Foot	21,722	\$547	\$11,881,934
Police Station	Sq. Foot	38,500	\$691	\$26,603,500
Museum of Contemp. Art	Sq. Foot	28,000	\$547	\$15,316,000
Planning and Comm. Dev't	Sq. Foot	2,860	\$547	\$1,564,420
Building and Zoning	Sq. Foot	2,772	\$547	\$1,516,284
Neighborhood Services	Sq. Foot	1,248	\$547	\$682,656
Housing & Social Services	Sq. Foot	2,960	\$547	\$1,619,120
Land	Acre	7.15	n/a	\$4,039,750
Motor Pool, 1855 NE 142 St				
Buildings	Sq. Foot	17,100	\$150	\$2,565,000
Land	Acre	5.51	n/a	\$4,361,040
Utility Operations Center, 1815 NE 150th St				
Buildings	Sq. Foot	22,330	\$150	\$3,349,500
Land	Acre	2.00	n/a	\$1,742,640
Total General Government				
Total General Government Facility Replacement Cost				\$75,241,844

Source: Building square feet for City government complex from Community Development Department, April 29, 2024; building square feet for motor pool and utility operations center, and acres and land values, from Miami-Dade Property Appraiser; building costs per square foot for city hall complex from WT Partnership, *North Miami Downtown Redevelopment, Program Cost Plan R4*, May 17, 2022; cost per square foot for motor pool and utility operations center estimated.

The general government fee includes vehicles for all city departments, although the bulk of them are used by police. The replacement value of the current vehicle fleet is based on unit cost of recent purchases. The City has entered into lease/purchase agreements for some of these vehicles, and the outstanding payments have been deducted to yield a net vehicle replacement value of about \$18 million, as shown in Table 19.

Table 19. General Government Vehicle Cost

Department	Replacement Value
Police	\$11,024,000
Street Maintenance	\$1,127,975
Stormwater	\$2,883,000
Water	\$3,301,000
Sewer	\$2,001,000
Total Vehicle Replacement Value	\$20,336,975
– Outstanding Lease Payments	-\$2,545,725
Vehicle Equity Replacement Value	\$17,791,250

Source: Replacement values from Table 53 in Appendix D; outstanding lease payments as of end of FY 2023 from Finance Department, March 21, 2024.

The cost per service unit is determined by dividing the replacement cost of existing buildings, land, and vehicles by the total number of service units in the city. As shown in Table 20, dividing the total replacement cost by the existing service units (functional population) yields the cost to maintain the existing level of service for general government facilities of \$1,674 per service unit.

Table 20. General Government Cost per Service Unit

Building and Land Replacement Value	\$75,241,844
Vehicle Equity Replacement Value	\$9,582,027
Total Existing Replacement Value	\$84,823,871
÷ Existing Functional Population	50,668
Cost per Service Unit	\$1,674

Source: Building and land cost from Table 18; vehicle cost from Table 19; existing service units from Table 17.

Net Cost per Service Unit

As described in the Legal Framework chapter, impact fees should be reduced to account for new development's contribution toward the cost of remedying existing deficiencies or retiring outstanding debt for existing facilities that are included in the existing level of service on which the fees are based, and State/Federal grants. The general government fees calculated in this study are based on the existing level of service, so there are no deficiencies. The City does not have any outstanding debt on existing facilities, and has not received any grants for general government facilities in the last five years. Outstanding capital lease payments for existing leased vehicles are similar to outstanding debt, but this has already been deducted from the vehicle replacement value.

However, the City does have outstanding developer credits for general government improvements made by the SoLe Mia development, which function much like debt. The most straightforward way to account for this future obligation is to divide it by existing service units, which places new development on a level playing field with existing development in terms of the cost funded with future obligations. The net cost per service unit is calculated in Table 21.

Table 21. General Government Net Cost per Service Unit

Outstanding Developer Credits	\$162,917
÷ Existing Functional Population	50,668
Developer Credit per Service Unit	\$3
Cost per Service Unit	\$1,674
– Developer Credit per Service Unit	-\$3
Net Cost per Service Unit	\$1,671

Source: Outstanding developer credits for park improvement completed for the SoLe Mia development from Oleta Partners request for credits, November 11, 2024; existing functional population from Table 17.

Net Cost Schedule

The updated maximum general government impact fees that can be adopted by the City based on this study are derived by multiplying the service units (functional population) associated with each land use type by the net cost per service unit, as shown in Table 22. For a comparison with current fees, see the Executive Summary.

Table 22. General Government Net Cost Schedule

Land Use Type	Unit	Func. Pop. per Unit	Net Cost per Func. Pop	Net Cost per Unit
Single Family Det./Att.	Dwelling	1.59	\$1,671	\$2,657
Multi-Family	Dwelling	1.10	\$1,671	\$1,838
Retail/Commercial	1,000 sq. ft.	2.65	\$1,671	\$4,428
Office	1,000 sq. ft.	1.53	\$1,671	\$2,557
Industrial/Warehouse	1,000 sq. ft.	0.24	\$1,671	\$401
Public/Institutional	1,000 sq. ft.	0.81	\$1,671	\$1,354

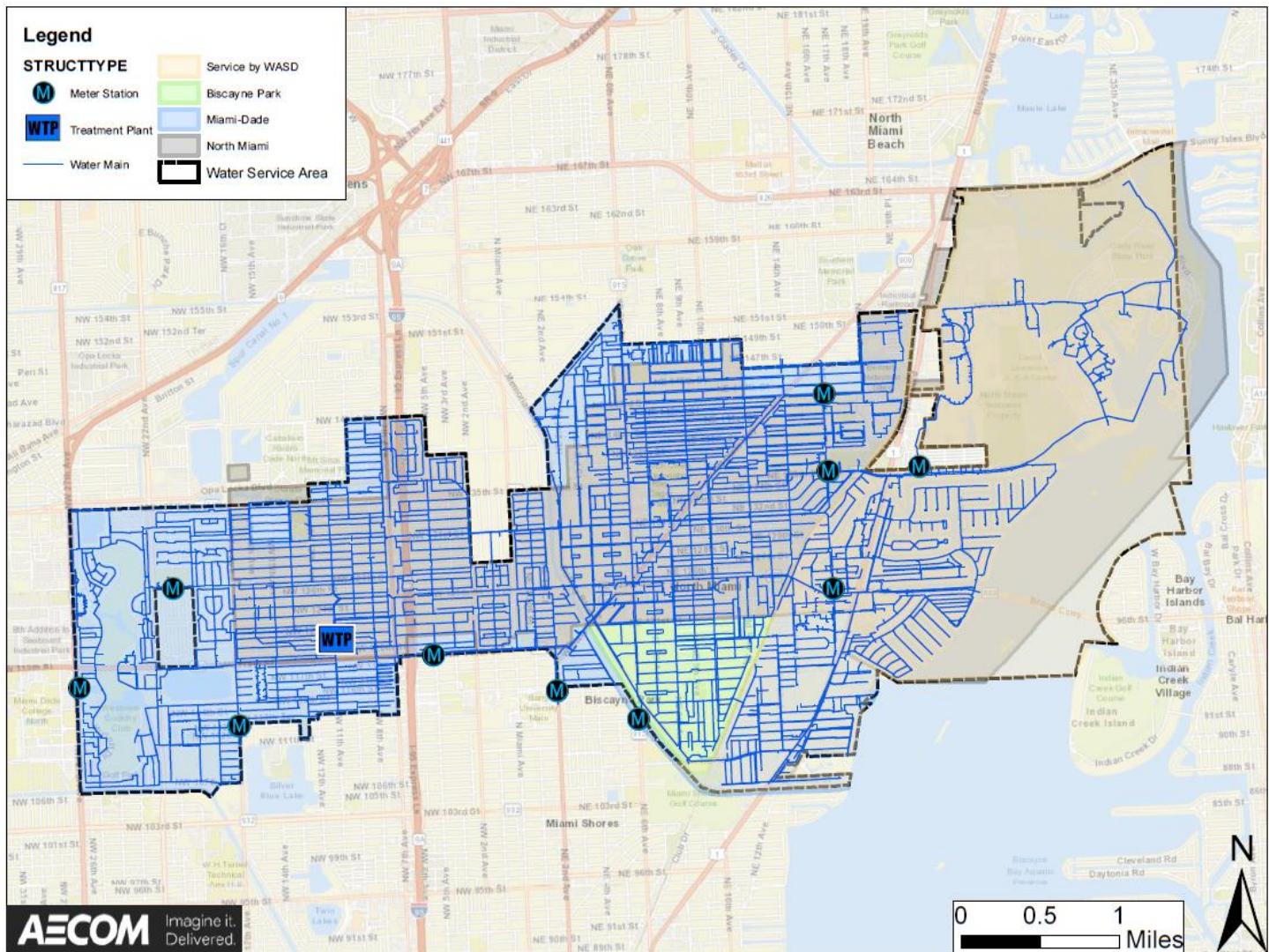
Source: Functional population per unit from Table 17; net cost per functional population from Table 21.

WATER

This chapter calculates updated impact fees for potable water. While the City's ordinance calls them "capacity fees," they are impact fees. The current fees are based on a study prepared in 2007. To make the fee calculations easier to follow, numbers in tables that are inputs into other tables are highlighted in red.

The City's water system includes eight wells that pump raw water from the Biscayne Aquifer, a water treatment plant, and a pressurized system of transmission and distribution lines. The City's water service area includes Biscayne Park, part of Miami Shores, and areas of unincorporated Miami-Dade County. It is bounded by NE 163rd street on the north, NW 105th Street on the south, Biscayne Bay on the east, and NW 27th Avenue on the west, as illustrated in Figure 4.

Figure 4. Water Service Area



Service Units

In impact fee analysis, disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for new facilities. This unit of measurement is called a service unit.

For water and wastewater utilities, impact fees are most often assessed based on the capacity of the water meter, rather than by land use type. The capacity of the meter represents, in effect, the purchase of a certain amount of capacity. This is a simple, intuitive approach that has become the standard practice in water (and sewer) impact fee studies. The original draft study that was prepared in 2007 used the meter size approach, but it was revised prior to adoption in 2010 to calculate fees by land use. The reason for this change is not clear.

This study recommends that the updated fees be based on the capacity of the water meter, rather than land use type. This approach will be much simpler to administer than the current land use categories in the capacity fee schedule. Determining the fees due for a large number of the 50 very specific uses requires determining the number of relatively difficult to quantify and often very impermanent features, such as the average number of passengers at an airport in a day, the number of physicians at a medical office, the number of seats in a restaurant, or students at a school. Basing the fees on the capacity of the meter makes it easy to assess the water and wastewater fees for any proposed use. In addition, meter capacities by size (pipe diameter in inches) and type (disc/compound or turbine) tend to be stable over time. Essentially, there is only one fee – the fee per equivalent dwelling unit. When fees are updated, the fees for all meter size/types will tend to increase at the same rate, making it easier to comply with phasing requirements.

Meter capacity is based on the rating by the manufacturer of gallons per minute (gpm) for continuous duty operations. Meter capacities differ by meter size (inches of diameter) and type (disc/compound or turbine). As described previously, meter capacities are converted into EDUs for each meter size and type. EDUs per meter is multiplied by the number of active water customers with that meter to determine the total number of service units utilizing the water system. The EDUs per meter and total EDUs are calculated in Table 23.

Table 23. Water Service Units

Meter Size (inches)	Meter Type	Capacity (gpm)	EDUs/Meter	Water Customers	Water EDUs
3/4"	Disc	15	1.00	18,069	18,069
1"	Disc	25	1.67	1,879	3,138
1.5"	Disc	50	3.33	173	576
2"	Disc	80	5.33	315	1,679
1.5"	Turbine	160	10.67	172	1,835
2"	Turbine	200	13.33	315	4,199
3"	Turbine	450	30.00	17	510
4"	Turbine	1,000	66.67	27	1,800
5"	Turbine	1,400	93.33	1	93
6"	Turbine	2,000	133.33	6	800
8"	Turbine	3,500	233.33	1	233
Total				20,975	32,932

Source: Meter sizes/types and capacities from Public Works Department, March 15, 2024 and specification sheets for Zell meters; water customers by meter size from Water and Sewer Division, February 23, 2024 (1.5" and 2" estimated evenly split between disc and turbine types per Public Works Department, April 4, 2024).

Cost per Service Unit

The City's water system capital facilities consist of two basic components: production and distribution. Production facilities tend to be concentrated and are generally expanded through major improvements, while distribution facilities are linear and expanded incrementally. The two components are addressed separately.

Water Production

The current water production system includes raw water supply wells, transmission lines from the wells to the Winson water treatment plant, which converts raw water into finished potable water, and high service pumps that convey finished water from the treatment plant into the distribution system.

The treatment plant has a maximum capacity of 9.3 million gallons per day (mgd). This is the amount of raw water that the City is permitted to withdraw daily from the Biscayne Aquifer. The actual capacity for finished water production from the treatment plant is slightly lower due to water loss during treatment. Given the age of the plant and need for improvements, the treatment plant has produced an average of only 6.31 mgd over the last five years. The City purchases the remainder of the water needed to satisfy the demand of its retail customers from the Miami-Dade Water and Sewer Department (WASD). It has made no bulk sales of purchased water to wholesale customers in at least the last five years.

The total water consumed by the City's retail water customers (including water lost in the distribution system) has averaged 13.14 million gallons per day (mgd) over the last five years, as shown in Table 24. The treatment plant is currently producing about half the potable water its existing retail customers consume, with the City purchasing the rest.

Table 24. Average Daily Water Demand

Year	Water Produced (mgd)	Water Purchased (mgd)	Total (mgd)
2019	5.96	6.86	12.82
2020	6.90	6.33	13.23
2021	7.13	5.91	13.04
2022	6.14	6.63	12.77
2023	5.44	8.43	13.87
Average	6.31	6.83	13.14
Percent	48.0%	52.0%	100.0%

Source: Public Works Department, April 22, 2024.

The existing treatment facilities are currently satisfying only part of existing customers' total water demand. Dividing current water production by existing water service units results in an existing level of service of 192 gallons per day (gpd) per equivalent dwelling unit (EDU), as shown in Table 25. This represents the existing level of service being provided by existing treatment facilities.

Table 25. Existing Water Demand per Service Unit

Average Daily Demand (gpd) for Produced Water	6,310,000
÷ Existing Equivalent Dwelling. Units (EDUs)	32,932
Average Daily Demand (gpd) per EDU	192

Source: Average daily produced water from Table 24; existing EDUs from Table 23.

On April 10, 2024, the Environmental Protection Agency (EPA) issued a new drinking water standard to protect communities from exposure to harmful per-and poly-fluoroalkyl substances (PFAS), also known as “forever chemicals,” which have been linked to deadly cancers, impacts to the liver and heart, and immune and developmental damage to infants and children. The current plant uses a lime-softening treatment process that reduces the scaling and buildup of minerals in water pipes and appliances and improves the taste and odor of water. In the future, to meet these new EPA standards, the existing plant will need to be converted to or replaced by one that uses a reverse-osmosis (RO) and/or nanofiltration (NF) technology treatment process.

The City’s consulting engineers estimate the cost to upgrade the existing treatment plant, including replacement or refurbishment of associated infrastructure (e.g., wells, lines from wells to the plant, finished water tanks, and pumps into the distribution system, as well as new technology to remove PFAs), will cost about \$120 million to enable the plant to produce its rated capacity of about 9 mgd. Additional capacity will need to use similar technology. The City is exploring different options for new treatment plants, which include the cost for the necessary infrastructure, including water rights, wells, storage, etc., as well as the technology to meet new EPA standards.

The City’s consulting engineers have prepared generalized cost estimates for adding new treatment capacity, which are summarized in Table 26. Larger facilities are generally more cost-effective per unit of capacity due to economies of scale, but the facility should be designed to meet projected needs. The City estimates that projected water customer growth within its service area will require a total of 20 mgd to meet maximum daily water demand by 2045. Assuming the existing plant is upgraded, a new 11 mgd plant would meet the City’s long-term needs and avoid the need to rely on purchased water from WASD, which will only become more expensive and may not be as available in the future. The updated fees will be based on these assumptions. These options are highlighted in Table 26.

Table 26. Water Treatment Improvement Options

Improvement	Estimated Cost	Capacity (gpd)	Cost/gpd
Upgrade existing 9 mgd plant	\$120,000,000	9,000,000	\$13.33
Build 6 mgd RO plant	\$283,000,000	6,000,000	\$47.17
Build 11 mgd RO plant	\$524,000,000	11,000,000	\$47.64
Build 14 mgd combination RO and NF plant	\$579,000,000	14,000,000	\$41.36
Build 20 mgd RO plant	\$717,000,000	20,000,000	\$35.85
Build 20 mgd combination RO and NF plant	\$720,000,000	20,000,000	\$36.00

Source: Public Works Department, April 19, 2024.

The water treatment cost per service unit is based on a blended cost of the two improvements identified above. The portion of the cost added by the upgrade of the existing plant are added to the

cost of the potential new plant and divided by the total added capacity to determine the average cost of new capacity, as shown in Table 27. This yields an average cost to add new treatment capacity of \$40.90 per gallon per day (gpd) for additional capacity.

Table 27. Water Treatment Cost per Gallon per Day

	Existing Plant	New Plant	Total
Improved Capacity (gpd)	9,000,000	11,000,000	20,000,000
– Existing Capacity (gpd)	-6,310,000	0	-6,310,000
Capacity Added (gpd)	2,690,000	11,000,000	13,690,000
x Cost per Gallon per Day	\$13.33	\$47.64	n/a
Total Cost of Added Capacity	\$35,857,700	\$524,040,000	\$559,897,700
÷ Total Added Capacity (gpd)			13,690,000
Average Cost per gpd of Capacity Added			\$40.90

Source: Treatment plant improvement costs and capacities from Table 26; existing capacity from Table 24.

Multiplying the cost per gpd times gallons per equivalent dwelling unit (EDU) yields the cost of \$7,853 per service unit, as shown in Table 28.

Table 28. Water Treatment Cost per Service Unit

Cost per Gallon per Day	\$40.90
x Gallons per Day per EDU	192
Treatment Cost per Service Unit	\$7,853

Source: Cost per gpd from Table 27; daily gallons per EDU from Table 25.

Water Distribution

The water distribution system includes high service pumps and water lines. The replacement costs of existing high service pumps are summarized in Table 29.

Table 29. Water High Service Pump Cost

Pump Station	MGD	Cost/MGD	Total Cost
HSP #1	3.00	\$680,000	\$2,040,000
HSP #2	1.40	\$680,000	\$952,000
HSP #3	3.20	\$680,000	\$2,176,000
HSP #4	1.40	\$680,000	\$952,000
HSP #5	3.00	\$680,000	\$2,040,000
HSP #6	3.60	\$680,000	\$2,448,000
Total	15.60		\$10,608,000

Source: Public Works Department, February 23, 2024.

The replacement costs of major water lines (16" diameter or larger) are summarized in Table 30.

Table 30. Water Line Cost

Diameter	Feet	Cost/Foot	Total Cost
16"	61,539	\$325	\$20,000,163
20"	10,073	\$406	\$4,089,612
24"	471	\$487	\$229,285
30"	8,426	\$609	\$5,131,474
Total	80,509		\$29,450,534

Source: Public Works Department, February 22, 2024.

The total water distribution cost per service unit is the sum of the replacement costs of high service pumps and major water lines, divided by existing service units. The result is \$1,216 per service unit, as shown in Table 31.

Table 31. Water Distribution Cost per Service Unit

Facility	Total Cost
High Service Pumps	\$10,608,000
Water Lines	\$29,450,534
Total Replacement Cost	\$40,058,534
÷ Existing Service Units (EDUs)	32,932
Net Distribution Cost per Service Unit	\$1,216

Source: High service pump cost from Table 29; water line cost from Table 30; existing service units from Table 23.

Cost per Service Unit Summary

The water cost per service unit is the sum of water treatment and distribution costs per service unit. This amounts to \$9,069 per equivalent dwelling unit (EDU), as shown in Table 32.

Table 32. Water Cost per Service Unit

Treatment Cost per EDU	\$7,853
Distribution Cost per EDU	\$1,216
Total Cost per Service Unit	\$9,069

Source: Treatment cost from Table 28; distribution cost from Table 31.

Net Cost per Service Unit

As described in the Legal Framework chapter, impact fees should be reduced to account for new development's contribution toward the cost of remedying existing deficiencies, retiring outstanding debt for existing facilities that are included in the existing level of service on which the fees are based, and State/Federal grants. The water fees calculated in this study are based on the existing level of service, so there are no deficiencies. The City does not have any outstanding debt on existing facilities. The City has not received any grants in the last five years for capacity improvements.

However, the City does have outstanding developer credits for water distribution improvements made by the SoLe Mia development. Developer credits function much like debt. The most straightforward way to account for this future obligation is to divide it by existing service units, which places new development on a level playing field with existing development in terms of the cost funded with future obligations. The net cost per service unit is calculated in Table 33.

Table 33. Water Net Cost per Service Unit

Outstanding Developer Credits	\$198,471
÷ Existing Service Units (EDUs)	32,932
Developer Credit per Service Unit	\$6
Cost per Service Unit	\$9,069
– Developer Credit per Service Unit	-\$6
Net Cost per Service Unit	\$9,063

Source: Outstanding developer credits for water improvement completed for the SoLe Mia development from Oleta Partners request for credits, November 11, 2024; existing service units from Table 23.

Net Cost Schedule

The updated maximum water impact fees that can be adopted by the City based on this study are derived by multiplying the service units (equivalent dwelling units or EDUs) associated with meter size/type by the net cost per EDU, as shown in Table 34. For a comparison with current fees, see the Executive Summary.

Table 34. Water Net Cost per Meter by Size

Meter Size (inches)	Meter Type	EDUs/Meter	Net Cost/EDU	Net Cost/Meter
3/4"	Disc	1.0	\$9,063	\$9,063
1"	Disc	1.7	\$9,063	\$15,135
1.5"	Disc	3.3	\$9,063	\$30,179
2"	Disc	5.3	\$9,063	\$48,305
1.5"	Turbine	10.7	\$9,063	\$96,700
2"	Turbine	13.3	\$9,063	\$120,807
3"	Turbine	30.0	\$9,063	\$271,884
4"	Turbine	66.7	\$9,063	\$604,217
5"	Turbine	93.3	\$9,063	\$845,831
6"	Turbine	133.3	\$9,063	\$1,208,343
8"	Turbine	233.3	\$9,063	\$2,114,623

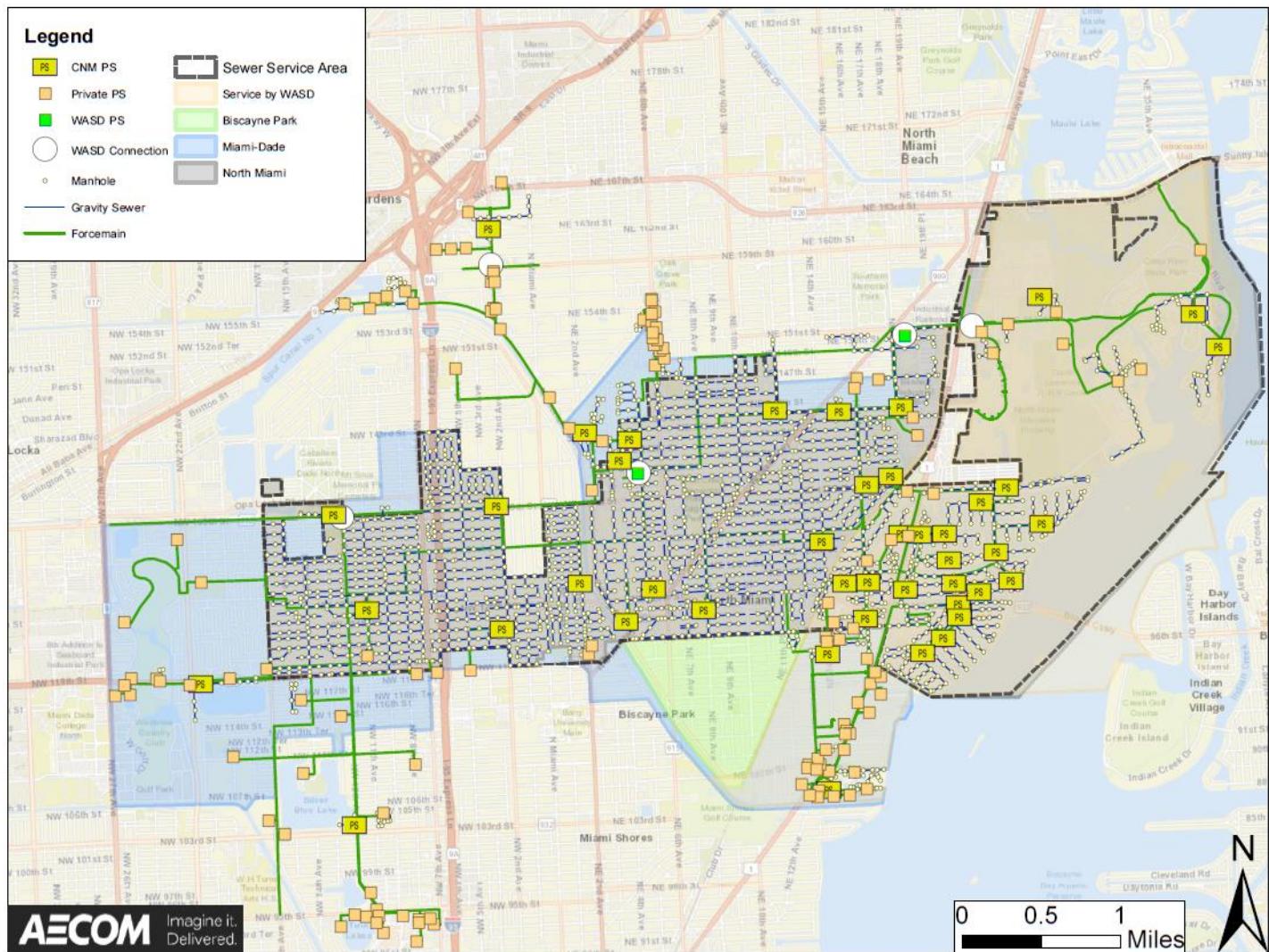
Source: EDUs per meter from Table 23; net cost per EDU from Table 33.

SEWER

This chapter calculates updated impact fees for the sanitary sewer system. To make the fee calculations easier to follow, numbers in tables that are inputs into other tables are highlighted in red.

The City's sewer system is comprised of 44 City-owned pump stations, 104 miles of gravity sewer and 28 miles of force mains. The City does not own or operate any wastewater treatment facilities. Sewage generated within the City's service area is conveyed to and treated at the Miami-Dade Water and Sewer Department's (WASD) North District Wastewater Treatment Plant (NDWWTP) through five (5) interconnections. The City's sewer service area includes the City's jurisdiction, as well as some areas of unincorporated Miami-Dade County. Figure 5 illustrates the City's sewer service area and sewer collection and conveyance system.

Figure 5. Sewer Service Area



Service Units

In impact fee analysis, disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for new facilities. This unit of measurement is called a service unit.

North Miami's current sewer fees are assessed based on land use type. One of the most widely-used ways to determine the demand for sewer facilities is the capacity of the water meter. The capacity of the water meter is converted into equivalent dwelling units (EDUs), with the smallest size meter assigned a value of one EDU and meters with more capacity assigned the number of EDUs proportional to their capacity compared to the capacity of the smallest meter.

The sewer EDUs per meter are the same as the water EDUs per meter. The total existing sewer service units are calculated by multiplying EDUs per meter by existing active meters to get EDU by meter size and type, and then summing to get total existing sewer EDUs. The result is 22,854 existing service units, as shown in Table 23.

Table 35. Existing Sewer Service Units

Meter Size (inches)	Meter Type	Capacity (gpm)	EDUs/Meter	Sewer Customers	Sewer EDUs
3/4"	Disc	15	1.00	11,719	11,719
1"	Disc	25	1.67	1,188	1,984
1.5"	Disc	50	3.33	115	383
2"	Disc	80	5.33	241	1,285
1.5"	Turbine	160	10.67	115	1,227
2"	Turbine	200	13.33	240	3,199
3"	Turbine	450	30.00	21	630
4"	Turbine	1,000	66.67	25	1,667
5"	Turbine	1,400	93.33	1	93
6"	Turbine	2,000	133.33	5	667
8"	Turbine	3,500	233.33	0	0
Total			13,670		22,854

Source: Meter sizes/types, capacities, and EDUs per meter from Table 23 in water chapter; customers from Public Works Department, April 3, 2024 (1.5" and 2" meters split roughly evenly between meter types per Public Works, April 4, 2024).

Cost per Service Unit

The capacity of the City's system of sewage collection and conveyance is adequate to accommodate the demand from existing customers in its service area, but that system will need to be enlarged and improved to accommodate growth. A recent analysis identified over \$25 million in system upgrades that will be necessary to meet projected demand over the next 20 years.⁴ The methodology used to quantify the sewer cost per service unit is referred to as "incremental expansion." It is calculated by dividing the total replacement cost of existing capital facilities by the existing number of service units. These facilities include sewer lines and pump stations.

⁴ AECOM, *Infrastructure Study for Comprehensive Plan Update*, January 4, 2023

Sewer Lines

Sewer lines 16" in diameter or larger are considered major system lines that are unlikely to be installed by developers for their projects. The replacement costs of existing major sewer lines are estimated in Table 36 based on the estimated cost per linear foot for the installation of new or larger lines to accommodate increased flows due to growth.

Table 36. Sewer Line Cost

Size (dia.) Inches	Linear Feet	Cost per Foot	Total Cost
Gravity Mains			
18	6,706	\$487	\$3,265,822
21	4,066	\$569	\$2,313,554
24	6,336	\$650	\$4,118,400
30	2,482	\$812	\$2,015,384
36	2,323	\$975	\$2,264,925
Force Mains			
16	1,267	\$390	\$494,130
18	18,586	\$439	\$8,159,254
20	18,480	\$497	\$9,184,560
24	11,405	\$585	\$6,671,925
Total			\$38,487,954

Source: Public Works Department, February 22, 2024.

Pump Stations

Existing pump stations and their estimated replacement costs are summarized in Table 37.

Table 37. Sewer Pump Station Cost

Basin	#Pumps	MGD	Cost/Pump	Total Cost
124-ST	1	0.12	\$26,608	\$26,608
A	3	4.64	\$26,608	\$79,824
ARCH-C1	1	0.09	\$26,608	\$26,608
ARCH-CR	1	0.05	\$26,608	\$26,608
B	3	1.71	\$26,608	\$79,824
BANYON	1	0.21	\$26,608	\$26,608
BELLOWS	2	0.54	\$26,608	\$53,216
BREEZES	1	0.37	\$26,608	\$26,608
BRIDGE	2	0.04	\$26,608	\$53,216
C	3	0.79	\$26,608	\$79,824
CABINS	2	0.05	\$26,608	\$53,216
CROTON	2	0.29	\$26,608	\$53,216
E	1	3.31	\$26,608	\$26,608
ENCH-1	2	0.03	\$26,608	\$53,216
ENCH-2	2	0.03	\$26,608	\$53,216
F	3	1.02	\$26,608	\$79,824
FIU-E	2	0.04	\$26,608	\$53,216
FUTURA	2	0.79	\$26,608	\$53,216

continued on next page

Table 37. Sewer Pump Station Cost (continued)

Basin	#Pumps	MGD	Cost/Pump	Total Cost
G	3	0.68	\$26,608	\$79,824
H	3	4.13	\$26,608	\$79,824
HIBUSCUS	3	0.20	\$26,608	\$79,824
HOSPITA	2	1.36	\$26,608	\$53,216
I	1	1.50	\$26,608	\$26,608
IN-ROAD	1	0.18	\$26,608	\$26,608
IVEN-TR	2	0.15	\$26,608	\$53,216
J	2	0.27	\$26,608	\$53,216
J1	2	0.07	\$26,608	\$53,216
K	2	0.55	\$26,608	\$53,216
K-INDUS	3	1.70	\$26,608	\$79,824
KADELL	2	0.37	\$26,608	\$53,216
KP-1	2	0.14	\$26,608	\$53,216
KP-2	2	0.10	\$26,608	\$53,216
LANDSHO	2	0.07	\$26,608	\$53,216
NOEL	2	0.08	\$26,608	\$53,216
PEPPER	2	n/a	\$26,608	\$53,216
PINE	2	0.16	\$26,608	\$53,216
PWY-GRV	2	0.02	\$26,608	\$53,216
QUAYSID	3	0.55	\$26,608	\$79,824
RODAN	2	0.06	\$26,608	\$53,216
SAN-S1	3	0.40	\$26,608	\$79,824
SAN-S2	3	0.40	\$26,608	\$79,824
SAN-S3	3	0.29	\$26,608	\$79,824
STADIUM	2	n/a	\$26,608	\$53,216
WOODS	1	0.43	\$26,608	\$26,608
Total	91	27.98		\$2,421,328

Source: Public Works Department, February 23, 2024.

Cost per Service Unit Summary

The sewer cost per service unit is the sum of the replacement cost of existing lines, pumps, and vehicles divided by existing service units. The result is \$1,790 per service unit, as shown in Table 38.

Table 38. Sewer Cost per Service Unit

Facility	Total Cost
Sewer Lines	\$38,487,954
Pumps	\$2,421,328
Total Replacement Cost of Existing Facilities	\$40,909,282
÷ Existing Service Units (EDUs)	22,854
Net Cost per Service Unit (EDU)	\$1,790

Source: Line cost from Table 36; pump cost from Table 37; existing service units from Table 35.

Net Cost per Service Unit

As described in the Legal Framework chapter, impact fees should be reduced to account for new development's contribution toward the cost of remedying existing deficiencies, retiring outstanding debt for existing facilities that are included in the existing level of service on which the fees are based, and State/Federal grants. The sewer fees calculated in this study are based on the existing level of service, so there are no deficiencies. The City does not have any outstanding debt on existing facilities. The City has not received any grants in the last five years for capacity improvements.

However, the City does have outstanding developer credits for sewer improvements made by the SoLe Mia development. Developer credits function much like debt. The most straightforward way to account for this future obligation is to divide it by existing service units, which places new development on a level playing field with existing development in terms of the cost funded with future obligations. The net cost per service unit is calculated in Table 39.

Table 39. Sewer Net Cost per Service Unit

Outstanding Developer Credits	\$491,653
÷ Existing Service Units (EDUs)	22,854
Developer Credit per Service Unit	\$22
Cost per Service Unit	\$1,790
– Developer Credit per Service Unit	-\$22
Net Cost per Service Unit	\$1,768

Source: Outstanding developer credits for sewer improvements completed for the SoLe Mia development from Oleta Partners request for credits, November 11, 2024; existing service units from Table 35.

Net Cost Schedule

The updated maximum sewer impact fees that can be adopted by the City based on this study are derived by multiplying the service units (equivalent dwelling units or EDUs) associated with meter size/type by the net cost per EDU, as shown in Table 40. For a comparison with current fees, see the Executive Summary.

Table 40. Sewer Net Cost per Water Meter by Size

Meter Size (inches)	Meter Type	EDUs/Meter	Net Cost/EDU	Net Cost/Meter
3/4"	Disc	1.0	\$1,768	\$1,768
1"	Disc	1.7	\$1,768	\$2,953
1.5"	Disc	3.3	\$1,768	\$5,887
2"	Disc	5.3	\$1,768	\$9,423
1.5"	Turbine	10.7	\$1,768	\$18,865
2"	Turbine	13.3	\$1,768	\$23,567
3"	Turbine	30.0	\$1,768	\$53,040
4"	Turbine	66.7	\$1,768	\$117,873
5"	Turbine	93.3	\$1,768	\$165,007
6"	Turbine	133.3	\$1,768	\$235,727
8"	Turbine	233.3	\$1,768	\$412,527

Source: EDUs per meter from Table 35; net cost per EDU from Table 39.

STORMWATER

This chapter calculates potential new impact fees for stormwater. The city's stormwater system consists of pump stations, storm drains, auger wells, catch basins, storm drains, and vehicles. To make the fee calculations easier to follow, numbers in tables that are inputs into other tables are highlighted in red.

Service Units

In impact fee analysis, disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for new facilities. This unit of measurement is called a service unit. The appropriate demand measure for stormwater facilities is a square foot of impervious cover. This section estimates the amount of existing impervious cover in the city.

Direct data on total square feet of impervious cover in the city, including the area covered by buildings, other impervious area associated with improvements such as driveways, parking lots, etc. on building sites, and impervious areas within public rights-of-way such as paving, is not available. In the absence of that information, existing impervious cover must be estimated. Due to the large degree of uncertainty, this estimate is purposefully generous, because the more existing impervious cover, the lower the fees will be (the cost per service unit is based on the total replacement cost of existing stormwater facilities divided by the estimated amount of existing impervious cover).

One piece of data that is available is the gross square feet of building floor area. Gross building floor area is the sum of the square footage for all floors of a building, measured from the outer surface of the exterior walls (this overestimates the impervious cover associated with multi-story buildings). Building floor area is tripled to account for other impervious area, including within public rights-of-way. The result is an estimate of about 131.1 million square feet of impervious cover, as shown in Table 41.

Table 41. Existing Impervious Cover

Building Floor Area (sq. ft.)	43,709,487
x Impervious Cover Factor	3
Impervious Area (sq. ft.)	131,128,461

Source: Building floor area from 2024 Miami-Dade Property Appraiser data; impervious cover factor estimated.

Cost per Service Unit

As noted above, the cost per service unit is based on the total replacement cost of existing stormwater facilities divided by the estimated amount of existing impervious cover. Existing stormwater capital components include pumps, drainage pipes, auger wells, catch basins, and french drains. The inventories and replacement costs of pump stations and drain lines are presented in the following two tables.

Table 42. Stormwater Pump Station Inventory

Pump Station/Pumps	MGD
1195 NE 143 Street	
Pump 1 - 50 HP low / 200 HP high	25.92
Pump 2 - 150 HP	21.60
1530 NE 136 Street	
Pump 1 - 80 HP	11.52
1799 NE 142 Street	
Pump 1 - 80 HP	11.52
13760 NE 5 Avenue	
Pump 1 - 80 HP	11.52
Total	82.08

Source: Public Works Department, March 15, 2024.

Table 43. Stormwater Drain Inventory

Dia. (in.)	Lin. Ft.	Cost/Ft.	Total Cost
16	15	\$100	\$1,500
18	78,375	\$100	\$7,837,500
20	914	\$100	\$91,400
21	197	\$100	\$19,700
24	29,172	\$170	\$4,959,240
24X12	55	\$170	\$9,350
24X24	52	\$170	\$8,840
25	35	\$170	\$5,950
28	44	\$170	\$7,480
30	8,124	\$170	\$1,381,080
36	41,292	\$280	\$11,561,760
42	8,190	\$280	\$2,293,200
43X68	52	\$280	\$14,560
48	7,144	\$400	\$2,857,600
49X33	130	\$400	\$52,000
54	4,509	\$400	\$1,803,600
56	1,187	\$400	\$474,800
60	6,061	\$550	\$3,333,550
66	1,407	\$550	\$773,850
72	7,929	\$700	\$5,550,300
84	1,513	\$700	\$1,059,100
90	555	\$700	\$388,500
135	95	\$1,000	\$95,000
156X140	54	\$1,000	\$54,000
Total	197,101		\$44,633,860

Source: Public Works Department, April 11, 2024.

Other capital components include auger wells, catch basins, and french drains, whose replacement costs are calculated in Table 44 on the following page. The total replacement cost is divided by the estimated total impervious cover in the city to calculate the cost per service unit of \$0.88 per square foot of impervious cover.

Table 44. Stormwater Cost per Service Unit

Facility	Unit	Quantity	Cost/Unit	Total Cost
Pump Stations	MGD	82.08	\$400,000	\$32,832,000
Storm Drains	n/a	n/a	n/a	\$44,633,860
Auger Wells	each	113	\$10,000	\$1,130,000
Catch Basins (4-ft. dia.)	each	3,267	\$10,000	\$32,670,000
French Drains	lin. ft.	49,719	\$80	\$3,977,520
Total Replacement Cost of Existing Facilities				\$115,243,380
÷ Existing Impervious Cover (sq. ft.)				131,128,461
Capital Cost per sq. ft. of Impervious Cover				\$0.88

Source: Pump station quantities from Table 42; storm drain costs from Table 43; remaining quantities and unit costs from Public Works, March 14 and April 17, 2024; existing impervious cover from Table 41.

Net Cost per Service Unit

As described in the Legal Framework chapter, impact fees should be reduced to account for new development's contribution toward the cost of remedying existing deficiencies, retiring outstanding debt for existing facilities that are included in the existing level of service on which the fees are based, and State/Federal grants. The stormwater fees calculated in this study are based on the existing level of service, so there are no deficiencies. The City does not have any outstanding debt on existing facilities.

The City has received three grants in the last five years for what may have been capacity improvements. A credit is provided that assumes this recent funding trend will continue over the long-term, quantified as 20 years. That indicates that the current lump sum equivalent of 10 cents per square foot of impervious cover can be attributed to new development to put it on the same footing with existing development.

Table 45. Stormwater Grant Funding Credit

Arch Creek N/S Flood Protection Project	\$3,840,000
Flood Mitigation at NE 3rd Court	\$400,000
NE 121 St Drainage Improvements	\$300,000
Total Grant Funding, Last 5 Years	\$4,540,000
÷ Years	5
Annual Grant Funding	\$908,000
÷ Existing Impervious Square Feet	131,128,461
Annual Grant Funding per sq. ft. of Impervious Cover	\$0.0069
x Net Present Value Factor (20 years)	14.34
Grant Funding Credit per sq. ft. of Impervious Cover	\$0.10

Source: Grant funding from Finance Department, June 7, 2024; existing square feet of impervious cover from Table 41; net present value factor based on a discount rate of 3.40%, which was the national average annual yield on AAA 20-year municipal bonds from fmsbonds.com on June 28, 2024.

Deducting the grant funding credit from the cost per service unit yields the net cost of \$0.78 per service unit (square foot of impervious cover), as shown in Table 46.

Table 46. Stormwater Net Cost per Service Unit

Capital Cost per sq. ft. of Impervious Cover	\$0.88
– Grant Funding Credit per sq. ft. of Impervious Cover	-\$0.10
Net Cost per sq. ft. of Impervious Cover*	\$0.78

* excluding new impervious cover within public rights-of-way

Source: Cost per service unit from Table 44; grant funding credit from Table 45.

APPENDIX A: EXISTING LAND USE

This appendix estimates existing land uses in the city. The amount of existing residential and nonresidential development is an important input into an impact fee analysis, because it is critical to determining the existing levels of service for the various types of facilities. To make the fee calculations easier to follow, numbers in tables that are inputs into other tables are highlighted in red.

Residential

The most recent and reliable estimate of the number of total housing units in the city is the 2020 U.S. Census 100% enumeration. The distribution of those units by housing type is estimated from the American Community Survey (ACS) conducted by the Census Bureau. Combining the 2020 housing unit estimates with the new units permitted in the last four years yields the estimates of current housing units by type presented in Table 47.

Table 47. Existing Housing Units by Type

Housing Type	Share of Units	2020 Units	New Units 2020-23	2024 Units
Single-Family Det./Att.	39.1%	8,969	60	9,029
Multi-Family	60.0%	13,763	652	14,415
Mobile Home	0.9%	206	0	206
Total	100.0%	22,938	712	23,650

Source: Housing type distribution in the city from U.S. Census, American Community Survey 2018-2022 5% sample tabular data; total 2020 units from 2020 decennial census, 2020 units by type based on share of units; new units permitted in 2020-2023 calendar years from City of North Miami, March 14, 2024; estimated 2024 units is sum of 2020 units and units permitted over last four years.

Nonresidential

Estimates of existing building floor area, in square feet, were derived from current Miami-Dade Property Appraiser records for the nonresidential land use categories, as summarized in Table 48.

Table 48. Existing Nonresidential Building Square Feet

Land Use Type	Square Feet	1,000 sq. ft.
Retail/Commercial	5,087,244	5,087
Office	2,378,362	2,378
Industrial/Warehouse	2,812,956	2,813
Public/Institutional	2,972,648	2,973
Total	13,251,210	13,251

Source: Miami-Dade Property Appraiser records for 2024, provided by Gridtics, March 18, 2024.

APPENDIX B: RESIDENTIAL OCCUPANCY

The average number of persons residing in different types of housing units is a key input into impact fee analysis, because the impact on parks and recreation and general government facilities is directly related to the number of people that reside in them. This can be measured for different housing types in terms of either average household size (persons per occupied unit) or persons per unit (including vacant units). Both measures are used in this study. To make the fee calculations easier to follow, numbers in tables that are inputs into other tables are highlighted in red.

The most local and recent data available for determining average residential occupancies is the 5% sample derived from annual 1% samples collected by the Census Bureau in 2018 through 2022, as presented in Table 49.

Table 49. Residential Occupancies by Housing Type

Housing Type	Persons	Total Units	Occup. Units	Occup. Rate	Persons/ Unit	Avg. HH Size
Single-Family Det./Att.	28,278	8,569	8,017	93.6%	3.30	3.53
Multi-Family	29,338	13,131	12,033	91.6%	2.23	2.44
Mobile Home	414	188	152	80.9%	2.20	2.72
Total	58,030	21,888	20,202	92.3%	2.65	2.87

Source: US Census Bureau, American Community Survey 5% sample tabular data from 2018-2022 for City of North Miami; persons per unit is ratio of persons to total units; average household size is ratio of persons to occupied units.

APPENDIX C: FUNCTIONAL POPULATION

Functional population is one of the most commonly-used approaches to estimating the demand for general government services. General government services benefit both residential and nonresidential development. To make the fee calculations easier to follow, numbers in tables that are inputs into other tables are highlighted in red.

Residential

For residential land uses, functional population is based on the average number of persons in the dwelling unit and the percentage of residents' time that is spent at home. These factors are discussed below.

Average Household Size

The number of persons in a dwelling unit can be measured in two ways: average household size (household population divided by occupied units) or persons per unit (household population divided by total units). Because the methodology for determining nonresidential functional population does not account for vacant buildings, residential functional population should also be based on the assumption of full occupancy for all buildings for consistency. For this reason, average household size is the most appropriate. Average household sizes for North Miami are calculated in Appendix B.

Time Spent at Home

The next step is to determine the percentage of time people spend at their place of residence versus away from home. In 2021, the U.S. Bureau of Labor Statistics interviewed one person each from 9,600 randomly-selected households to determine how people spent their time during a recent day. Survey respondents were limited to persons aged 15 or older in the civilian population. The survey determined the average number of waking hours spent on various types of activities. While it did not itemize where the activities occurred, reasonable assumptions have been made about which activities were more likely to take place at the place of residence or away from home. The results, summarized in Table 50 on the following page, indicate that people spend an average of 45% of waking hours each day at their place of residence.

Table 50. Time Usage Survey Data

Primary Activity	Waking Hrs. per Day	At Home	Away
Personal care activities (other than sleeping)	0.76	0.76	—
Eating and drinking*	1.14	0.86	0.28
Household activities	1.80	1.80	—
Purchasing goods and services	0.65	—	0.65
Caring for and helping household members	0.48	0.48	—
Caring for and helping non-household members	0.18	—	0.18
Working and work-related activities	4.45	—	4.45
Educational activities	0.51	—	0.51
Organizational, civic and religious activities	0.17	—	0.17
Watching television	2.57	2.57	—
Other leisure and sports	2.16	—	2.16
Telephone, mail and email	0.22	0.22	—
Other activities	0.20	0.20	—
Total Waking Hours	15.29	6.89	8.40
Percent of Time	100%	45%	55%

* assumes 3/4 of meals eaten at home

Source: U.S. Dept. of Labor, Bureau of Labor Statistics, *American Time Use Survey*, Table 2: Time spent in primary activities per weekday, civilian population 15 years or older, 2021 annual averages, June 23, 2022.

Summary

Functional population per dwelling unit by housing type is calculated by multiplying average household size by the percentage of waking hours spent at home. The results are shown in Table 51.

Table 51. Residential Functional Population per Unit by Housing Type

Housing Type	Unit	Average HH Size	% of Waking Hours at Home	Func. Pop. per Unit
Single-Family Det./Att.	Dwelling	3.53	0.45	1.59
Multi-Family	Dwelling	2.44	0.45	1.10
Mobile Home	Dwelling	2.72	0.45	1.23

Source: Average household size from Table 49; percentage of waking hours spent at home from Table 51.

Nonresidential

The functional population methodology for nonresidential uses starts with trip generation rates. The number of daily trips is multiplied by the average vehicle occupancy to determine the total number of persons going to the site each day. The number of employees is estimated from average employee densities. Non-employees are the remaining persons going to the site. Employees are estimated to spend eight hours per day at their place of employment, and visitors are estimated to spend one hour per visit. Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a weekday by 16 hours. The formula used to derive the nonresidential functional population estimates is summarized in Figure 6.

Figure 6. Nonresidential Functional Population Formula

$$\text{FUNCPOP/1,000 sf} = (\text{employee hours/1000 sf} + \text{visitor hours/1,000 sf}) \div 16 \text{ hours/day}$$

Where:

$$\text{Employee hours/1,000 sf} = \text{employees/1,000 sf} \times 8 \text{ hours/day}$$

$$\text{Visitor hours/1,000 sf} = \text{visitors/1,000 sf} \times 1 \text{ hour/visit}$$

$$\text{Visitors/1,000 sf} = \text{weekday ADT/1,000 sf} \times \text{avg. vehicle occupancy} - \text{employees/1,000 sf}$$

$$\text{Weekday ADT/1,000 sf} = \text{one-way avg. daily trips (total trip ends} \div 2)$$

Using the formula above and trip generation rates from the *Trip Generation Manual*, vehicle occupancy rates from the *National Household Travel Survey* and employee densities from the U.S. Department of Energy, nonresidential functional population estimates per 1,000 square feet of gross floor area are calculated. Table 52 presents the results of these calculations for the nonresidential land use categories.

Table 52. Nonresidential Functional Population per Unit by Land Use

Land Use	Unit	Trip Rate	Persons/ Trip	Workers/ Unit	Visitors/ Unit	Functional Pop./Unit
Retail/Commercial	1,000 sq. ft.	18.50	1.98	0.82	35.81	2.65
Office	1,000 sq. ft.	5.42	1.96	1.97	8.65	1.53
Industrial/Warehouse	1,000 sq. ft.	0.72	1.30	0.41	0.53	0.24
Public/Institutional	1,000 sq. ft.	3.80	2.76	0.36	10.13	0.81

Source: Trip rates are 1/2 of average daily trip ends on a weekday from Institute for Transportation Engineers (ITE), *Trip Generation Manual*, 11th edition, 2021 for shopping center, general office, mini-warehouse, and nursing home; persons/trip is average vehicle occupancy from Federal Highway Administration, *National Household Travel Survey*, 2017 by trip purpose for shopping, medical/dental, to from work, and school/church; employees/unit from U.S. Department of Energy, *Commercial Buildings Energy Consumption Survey*, 2018; visitors/unit is trips times persons/trip minus employees/unit; functional population/unit calculated based on formula in Figure 6.

APPENDIX D: VEHICLE INVENTORY

Table 53. Vehicle Inventory

Vehicle Type	Units	Unit Cost	Total Cost
Marked Patrol, SUV	87	\$65,000	\$5,655,000
Marked Patrol, Sedan	2	\$55,000	\$110,000
Marked Patrol, K-9	6	\$70,000	\$420,000
Marked Patrol, Pickup	4	\$55,000	\$220,000
Marked PSA, SUV	3	\$32,000	\$96,000
Unmarked, SUV	29	\$60,000	\$1,740,000
Unmarked, Sedan	2	\$40,000	\$80,000
Unmarked, Pickup	12	\$50,000	\$600,000
Van, Crime Scene	3	\$100,000	\$300,000
Van, Prisoner Transport	1	\$100,000	\$100,000
Van, SWAT	1	\$80,000	\$80,000
Van, Animal Control	1	\$90,000	\$90,000
Van, Cargo	1	\$50,000	\$50,000
Van, Passenger	1	\$55,000	\$55,000
Boat, Large	2	\$250,000	\$500,000
Boat, Small	1	\$30,000	\$30,000
Motorcycle	16	\$32,000	\$512,000
Trailer, Boat	2	\$9,000	\$18,000
Trailer, Horse	2	\$16,000	\$32,000
Trailer, Cargo	2	\$12,000	\$24,000
Trailer, Light Tower	6	\$40,000	\$240,000
Trailer, Message Board	2	\$12,000	\$24,000
Trailer, Speed	4	\$12,000	\$48,000
Subtotal, Police			\$11,024,000
2023 Starcraft Allstar Street Sweeper	1	\$219,442	\$219,442
2023 R4 Air Street Sweeper	1	\$358,031	\$358,031
2024 Freightliner 114 SD Vac Truck	1	\$550,502	\$550,502
Subtotal, Street Maintenance			\$1,127,975
Boat Skiff	1	\$25,000	\$25,000
Backhoe/Loader	2	\$180,000	\$360,000
Jet/Vac Truck	2	\$380,000	\$760,000
Compressor, Trailered	1	\$20,000	\$20,000
Pump, 4" Portable	2	\$30,000	\$60,000
Trailer, Small	2	\$12,000	\$24,000
Trailer, Large	2	\$26,000	\$52,000
Trailer, Message Board	1	\$15,000	\$15,000
Trailer, Light Tower	1	\$15,000	\$15,000
Street Sweeper	2	\$320,000	\$640,000
Truck, Loader	1	\$220,000	\$220,000
SUV, Medium	1	\$35,000	\$35,000
Truck, 150/1500	1	\$42,000	\$42,000
Truck, 250/2500	2	\$60,000	\$120,000
Truck, 450/4500	2	\$90,000	\$180,000
Truck, Dump Small	1	\$75,000	\$75,000
Truck, Dump Large	2	\$120,000	\$240,000
Subtotal, Stormwater			\$2,883,000

continued on next page

Table 53. Vehicle Inventory (continued)

Vehicle Type	Units	Unit Cost	Total Cost
Backhoe/Loader	2	\$180,000	\$360,000
Compressor, Trailered	1	\$20,000	\$20,000
Fork Lift	1	\$30,000	\$30,000
Pump, 4" Portable	3	\$30,000	\$90,000
Pump, 6" Portable	5	\$60,000	\$300,000
Trailer, Small	2	\$12,000	\$24,000
Trailer, Large	2	\$26,000	\$52,000
Trailer, Message Board	3	\$15,000	\$45,000
Trailer, Light Tower	2	\$15,000	\$30,000
Trencher	1	\$30,000	\$30,000
Skid Steer	2	\$50,000	\$100,000
Excavator, Compact	2	\$50,000	\$100,000
Generator, Portable	6	\$100,000	\$600,000
SUV, Medium	2	\$35,000	\$70,000
Truck, 150/1500	5	\$42,000	\$210,000
Truck, 250/2500	5	\$60,000	\$300,000
Truck, 350/3500	4	\$75,000	\$300,000
Truck, 450/4500	2	\$100,000	\$200,000
Truck, Dump Large	2	\$120,000	\$240,000
Truck, Camera	1	\$200,000	\$200,000
Subtotal, Water			\$3,301,000
Trailer, Light Tower	2	\$15,000	\$30,000
Trencher	1	\$30,000	\$30,000
Skid Steer	2	\$50,000	\$100,000
Excavator, Compact	2	\$50,000	\$100,000
Generator, Portable	6	\$100,000	\$600,000
SUV, Medium	2	\$3,500	\$7,000
Truck, 150/1500	2	\$42,000	\$84,000
Truck, 250/2500	6	\$60,000	\$360,000
Truck, 350/3500	2	\$75,000	\$150,000
Truck, 450/4500	3	\$100,000	\$300,000
Dump Truck, Large	2	\$120,000	\$240,000
Subtotal, Sewer			\$2,001,000
Grand Total			\$20,336,975

Source: City of North Miami Public Works, February 24, 2024.

APPENDIX E: FLORIDA IMPACT FEE ACT

The 2006 Florida Legislature passed Senate Bill 1194, which established certain requirements for impact fees in Florida. It was most recently amended by House Bill 337, which was signed by the governor and became effective on June 4, 2021. The current Florida Impact Fee Act reads as follows (substantive changes made by HB 337 are indicated by underline/strike-out). Subsequent amendments to the impact fee act were passed by the legislature in HB 479 in March 2024, which will take effect on October 1, 2024 if signed by the governor (these upcoming changes are highlighted in red).

163.31801 Impact fees; short title; intent; minimum requirements, audits; challenges. --

- (1) This section may be cited as the "Florida Impact Fee Act."
- (2) The Legislature finds that impact fees are an important source of revenue for a local government to use in funding the infrastructure necessitated by new growth. The Legislature further finds that impact fees are an outgrowth of the home rule power of a local government to provide certain services within its jurisdiction. Due to the growth of impact fee collections and local governments' reliance on impact fees, it is the intent of the Legislature to ensure that, when a county or municipality adopts an impact fee by ordinance or a special district adopts an impact fee by resolution, the governing authority complies with this section.
- (3) For purposes of this section, the term:
 - (a) "Infrastructure" means 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. The term also includes a fire department vehicle, an emergency medical service vehicle, a sheriff's office vehicle, a police department vehicle, a school bus as defined in s. 1006.25, and the equipment necessary to outfit the vehicle or bus for its official use. For independent special fire control districts, the term includes new facilities as defined in s. 191.009(4).⁵
 - (b) "Public facilities" has the same meaning as in s. 163.3164 and includes emergency medical, fire, and law enforcement facilities.⁶
- (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 available within 4 years of the current impact fee update. The new study must be adopted by the local government within 12 months of the initiation of the new impact fee study if the local government increases the impact fee.
 - (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.

⁵ 191.009(4) ... As used in this subsection, "new facilities" means land, buildings, and capital equipment, including, but not limited to, fire and emergency vehicles, radiotelemetry equipment, and other firefighting or rescue equipment. ...

⁶ 163.3164(39) ... "Public facilities" means major capital improvements, including transportation, sanitary sewer, solid waste, drainage, potable water, educational, parks and recreational facilities. ...

- (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 commercial construction.

(5) (a) Notwithstanding any charter provision, comprehensive plan policy, ordinance, development order, development permit, or resolution, the local government or special district must credit against the collection of the impact fee any contribution, whether identified in a proportionate share agreement or other form of exaction, related to public ~~education~~ facilities, including land dedication, site planning and design, or construction. Any contribution must be applied on a dollar-for dollar basis at fair market value to reduce any ~~education-based~~ impact fee collected for the general category or class of public facilities or infrastructure for which the contribution was made.

(b) If a local government or special district does not charge and collect an impact fee for the general category or class of public facilities or infrastructure contributed, a credit may not be applied under paragraph (a).

(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.

(7) If an impact fee is increased, the holder of any impact fee credits, whether such credits are granted under s. 163.3180, s. 380.06, or otherwise, which were in existence before the increase, is entitled to the full benefit of the intensity or density prepaid by the credit balance as of the date it was first established. ~~This subsection shall operate prospectively and not retrospectively. If a local government adopts an alternative transportation system pursuant to s. 163.3180(5)(i), the holder of any transportation or road impact fee credits granted under s. 163.3180 or s. 380.06 or otherwise that were in existence before the adoption of the alternative transportation system is entitled to the full benefit of the intensity and density prepaid by the credit balance as of the date the alternative transportation system was first established.~~

(8) A local government, school district, or special district must submit with its annual financial report required under s. 218.32 or its financial audit report required under s. 218.39 a separate affidavit signed by its chief financial officer or, if there is no chief financial officer, its executive officer attesting, to the best of his or her knowledge, that all impact fees were collected and expended by the local government, school district, or special district, or were collected and expended on its behalf, in full compliance with the spending period provision in the local ordinance or resolution, and that funds expended from each impact fee account were used only to acquire, construct, or improve specific infrastructure needs.

(9) In any action challenging an impact fee or the government's failure to provide required dollar-for-dollar credits for the payment of impact fees as provided in s. 163.3180(6)(h)2.b., the government has the burden of proving by a preponderance of the evidence that the imposition or amount of the fee or credit meets the requirements of state legal precedent and this section. The court may not use a deferential standard for the benefit of the government.

(10) Impact fee credits are assignable and transferable at any time after establishment from one development or parcel to any other that is within the same impact fee zone or impact fee district or that is within an adjoining impact fee zone or impact fee district within the same local government jurisdiction and which receives benefits from the improvement or contribution that generated the credits. This subsection applies to all impact fee credits regardless of whether the credits were established before or after the effective date of this act.

(11) A county, municipality, or special district may provide an exception or waiver for an impact fee for the development or construction of housing that is affordable, as defined in s. 420.9071. If a county, municipality, or special district provides such an exception or waiver, it is not required to use any revenues to offset the impact.

(12) This section does not apply to water and sewer connection fees.

(13) In addition to the items that must be reported in the annual financial reports under s. 218.32, a local government, school district, or special district must report all of the following information on all impact fees charged:

(a) The specific purpose of the impact fee, including the specific infrastructure needs to be met, including, but not limited to, transportation, parks, water, sewer, and schools.

(b) The impact fee schedule policy describing the method of calculating impact fees, such as flat fees, tiered scales based on number of bedrooms, or tiered scales based on square footage.

(c) The amount assessed for each purpose and for each type of dwelling.

(d) The total amount of impact fees charged by type of dwelling.

(e) Each exception and waiver provided for construction or development of housing that is affordable.