

# MEMORANDUM

Agenda Item No. 7(I)

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**TO:** Honorable Chairman Joe A. Martinez  
and Members, Board of County Commissioners

**DATE:** July 7, 2011

**FROM:** R. A. Cuevas, Jr.  
County Attorney

**SUBJECT:** Ordinance amending Sec.  
24-43.1 of the Code, relating to  
sewage flows for sanitary sewers  
and the maximum allowable  
septic tank sewage loading  
requirements

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**This item differs from the original version as stated on the County Manager's memorandum.**

The accompanying ordinance was prepared by Department of Environmental Resources Management and placed on the agenda at the request of Prime Sponsor Vice Chairwoman Audrey M. Edmonson.



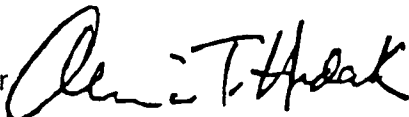
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R. A. Cuevas, Jr.  
County Attorney

RAC/jls

# Memorandum



**Date:** July 7, 2011  
**To:** Honorable Chairman Joe A. Martinez  
and Members, Board of County Commissioner.  
**From:** Alina T. Hudak  
County Manager   
**Subject:** Ordinance Amending Section 24-43.1 of the Code of Miami-Dade County, Florida, Relating to Sewage Flows for Sanitary Sewers and the Maximum Allowable Septic Tank Sewage Loading Requirements

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**This substitute differs from the original ordinance in that (1) "Shopping Center/Mall: Shell/Common Area" was corrected from "5 gpd/100 sq. ft." to "10 gpd/100 sq. ft." (2) the heading "Industrial Land Uses" was removed and all items under this heading were merged with items under the heading "Commercial Land Uses" and alphabetized (3) additional explanation is provided regarding flow rate changes and (4) examples of changes and associated fees are provided.**

## **Recommendation**

It is recommended that the Board of County Commissioners approve the attached Ordinance Amending Section 24-43.1 of the Code of Miami-Dade County, Florida (Code), relating to sewage flows for sanitary sewers and the maximum allowable septic tank sewage loading requirements.

## **Scope**

The proposed ordinance involves environmental regulation throughout Miami-Dade County.

## **Fiscal Impact/Funding Source**

This ordinance will not require additional funding and will be revenue neutral to the Department of Environmental Resources Management (DERM). DERM does not collect any fees for water and sewer connections.

The Miami-Dade Water and Sewer Department (WASD) charges for water and sewer connections based on a cost per gallon reflecting the value of water/sewer collection, treatment and transmission systems serving the property multiplied by the number of gallons assigned to the proposed use. The proposed ordinance, as compared to the flow rates in the Code, decreases the standard gallonage for various usages without changing the cost per gallon, thus reducing most sewer and water connection charges. WASD's approved FY2010-11 capital improvement plan/budget anticipated the slight reduction in water and sewer connection charges.

## **Track Record/Monitor**

WASD charges and monitors the connection fees affected by this ordinance.

## **Background**

Over 30 years ago, Section 24-43.1 of the Code set forth sewage unit flow rates to determine sewage flows for sanitary sewers and septic tank sewage loading for various land uses. DERM and WASD recently coordinated on proposing revised sewage unit flow rates for various land uses as set forth in Section 24-43.1 of the Code.

This proposed ordinance is being submitted for enactment in response to changes in the Florida Building Code which mandate the use of water-conserving fixtures in new construction and to better reflect overall water demand. WASD contracted with two local consulting firms, Cordova Rodriguez and Associates, Inc. and Samabi Group, Inc., to analyze the water usage in WASD's service area and provide

recommendations for revising the sewage unit flow rates. The study found decreased water consumption in many of the land use categories. Therefore, the study concluded that it was necessary to revise the daily average sewage unit flow rates set forth in Chapter 24 based upon decreased water consumption in some land use categories throughout WASD's service area.

The study analyzed the five (5) residential land use categories and the 51 commercial/industrial land use categories. As a result of the study, the standard flow rates for all five (5) residential land use categories were decreased. The study also affected the standard flow rates for the 51 commercial/industrial land use categories as follows: ten (10) were decreased, nine (9) were increased, eleven (11) were modified and simplified in methodology to calculate the flow rate based on square footage of the business as opposed to variables that could change (i.e. number of students, number of doctors, etc), thirteen (13) remained the same and eight (8) were deleted because of the simplified methodology. In addition, two (2) new residential land use categories were added to allow for different home sizes and eleven (11) commercial land use categories were added to allow for variations of similar businesses. Therefore, the ordinance now includes seven (7) residential land use categories and 54 commercial land use categories for a total of 61 land use categories. In the proposed ordinance, the "Industrial Land Uses" heading was removed and those uses listed under that heading now appear under the "Commercial Land Uses" heading.

This ordinance also provides for the use of an engineering flow study, in lieu of the revised table of sewage unit flow rates for sanitary sewers and septic tank sewage loading, when requested by an applicant for special circumstances or to allow for non-standard fixtures (high efficiency, low flow, etc). Such studies would use recognized, standard practices of the engineering profession.

In some cases, this ordinance's sewage flow rates equate to decreased WASD connection charges as compared to the rates in the Code. The total overall sewage flow rate of a proposed business is determined by calculating the sewage flow rate the new business will generate minus the sewage flow rate the previous business generated. The comparison of overall sewage flow rates and WASD connection charges of a proposed business is illustrated below:

Example 1: Proposed 3,900 sq. ft. full service restaurant with 150 seats to replace a 3,900 sq. ft retail store.

**Sewage Unit Flow Rates in Ch. 24-43.1(5) of the Code**

Proposed Business	Sewage Unit Flow Rate	Total Sewage Flow Rate	Previous Business	Previous Sewage Unit Flow Rate	Overall Sewage Flow Rate
150 seats restaurant	50 gallons per day (gpd)/seat	7,500 gpd	3,900 sq. ft. retail	5 gpd/100 sq. ft.	7,305 gpd

**Sewage Flow Rates as reflected in this ordinance**

Proposed Business	Sewage Unit Flow Rate	Total Sewage Flow Rate	Previous Business	Previous Sewage Unit Flow Rate	Overall Sewage Flow Rate
3,900 sq. ft.	100 gpd/100 sq.ft	3,900 gpd	3,900 sq. ft. retail	10 gpd/100 sq. ft.	3,510 gpd

In this case, this ordinance's unit sewage flow rate equals a reduced WASD connection charge, as compared to the rates in the Code, as illustrated below:

**WASD Connection Charges based on Ch. 24-43.1(5) of the Code**

WASD Connection Charges	WASD Unit Rate per Gallons per Day (GPD)	Overall Sewage Flow Rate	Total Connection Charge
Water	1.39*	7,305 gpd	\$10,153.95
Sewer	5.60*	7,305 gpd	\$40,908.00
Total			\$51,061.95

*\*Implementing Order 04-110 "Schedule of Rates, Fees and Charges for Miami-Dade Water and Sewer Department"*

**WASD Connection Charges as reflected in this ordinance**

WASD Connection Charges	WASD Unit Rate per Gallons per Day (GPD)	Overall Sewage Flow Rate	Total Connection Charge
Water	1.39*	3,510 gpd	\$4,878.90
Sewer	5.60*	3,510 gpd	\$19,656.00
Total			\$24,534.90

*\* Implementing Order 04-110 "Schedule of Rates, Fees and Charges for Miami-Dade Water and Sewer Department"*

Furthermore, based on this ordinance's sewage flow rates, DERM is able to approve more units or increased density on properties served or to be served by septic tanks while complying with sewage loading restrictions. Pursuant to Chapter 24, maximum allowable sewage loading is 1,500 gallons per day (gpd)/acre for properties served by septic tank and public water.

Example 2: Proposed eight (8) unit apartment building on one (1) acre parcel to be served by a septic tank system.

**Sewage Unit Flow Rates in Ch. 24-43.1(5) of the Code**

Proposed Development	Sewage Unit Flow Rate	Total Sewage Flow Rate	Maximum Allowable Sewage Loading	Can DERM Approve?
8 unit apartment building	200 gpd/apt	1,600 gpd	1,500 gpd/acre	No, exceeds sewage loading

**Sewage Unit Flow Rates as reflected in this ordinance**

Proposed Development	Sewage Unit Flow Rate	Total Sewage Flow Rate	Maximum Allowable Sewage Loading	Can DERM Approve?
8 unit apartment building	150 gpd/apt	1,200 gpd	1,500 gpd/acre	Yes, does not exceed sewage loading
9 unit apartment building	150 gpd/apt	1,350 gpd	1,500 gpd/acre	Yes, does not exceed sewage loading
10 unit apartment building	150 gpd/apt	1,500 gpd	1,500 gpd/acre	Yes, does not exceed sewage loading
11 unit apartment building	150 gpd/apt	1,650 gpd	1,500 gpd/acre	No, exceeds sewage loading



Assistant County Manager

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# MEMORANDUM

(Revised)

**TO:** Honorable Chairman Joe A. Martinez  
and Members, Board of County Commissioners

**DATE:** July 7, 2011

**FROM:** R. A. Cuevas, Jr.  
County Attorney

**SUBJECT:** Agenda Item No. 7(I)

Please note any items checked.

**“3-Day Rule” for committees applicable if raised**

**6 weeks required between first reading and public hearing**

**4 weeks notification to municipal officials required prior to public hearing**

**Decreases revenues or increases expenditures without balancing budget**

**Budget required**

**Statement of fiscal impact required**

**Ordinance creating a new board requires detailed County Manager’s report for public hearing**

**No committee review**

**Applicable legislation requires more than a majority vote (i.e., 2/3’s \_\_\_\_, 3/5’s \_\_\_\_, unanimous \_\_\_\_ ) to approve**

**Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required**

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Approved \_\_\_\_\_ Mayor

Agenda Item No. 7(I)

Veto \_\_\_\_\_

7-7-11

Override \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

ORDINANCE AMENDING SECTION 24-43.1 OF THE CODE OF MIAMI-DADE COUNTY, FLORIDA, RELATING TO SEWAGE FLOWS FOR SANITARY SEWERS AND THE MAXIMUM ALLOWABLE SEPTIC TANK SEWAGE LOADING REQUIREMENTS; PROVIDING SEVERABILITY, INCLUSION IN THE CODE, AND AN EFFECTIVE DATE

**BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA:**

Section 1. Section 24-43.1 of the Code of Miami-Dade County, Florida, is hereby amended to read as follows:<sup>1</sup>

**Sec. 24-43.1. Liquid waste disposal and potable water supply systems.**

- (1) The intent and purpose of this section is to safeguard the public health, safety, and welfare by regulating liquid waste storage, disposal and treatment methods other than sanitary sewers and any source of potable water supply.

\* \* \*

- (5) The following table shall be utilized by the Director or the Director's designee to determine sewage flows for sanitary sewers and the maximum allowable septic tank sewage loading requirements set forth in this chapter. If the Director or the Director's designee receives competent factual data and information such as actual on-site measured sewage flows or actual metered water bills, >>or an engineering flow study which utilizes recognized standard practices of the engineering profession, is signed and sealed by an engineer licensed by the State of Florida, and approved by the Director or the Director's designee,<< the Director or the Director's designee may utilize this data and information to determine sewage flows for sanitary sewers and the maximum allowable septic tank sewage loading requirements set forth in this chapter in lieu of the table below. This table shall not be utilized for the sizing of septic tanks. Sizing of septic tanks shall be in accordance with Florida Statutes regarding septic tanks.

~~[[Type of Land Use, Gallons Per Day (GPD)~~

~~Residential Land Uses:~~

~~Single family residence: 350 (GPD/unit)~~

~~Townhouse residence: 250 (GPD/unit)~~

~~Apartment residence: 200 (GPD/unit)~~

<sup>1</sup> Words stricken through and/or [[double bracketed]] shall be deleted. Words underscored and/or >>double arrowed<< constitute the amendment proposed. Remaining provisions are now in effect and remain unchanged.

~~Mobile home residence: 300 (GPD/unit)~~

~~Duplex or twin home residence: 250 (GPD/unit)~~

~~Commercial Land Uses:~~

~~Barbershop: 10/100 (GPD/sq. ft.)~~

~~Beauty salon or hair boutique: 75 (GPD/chair)~~

~~Bowling alley: 100 (GPD/lane)~~

~~Dentist's office:~~

~~(a) Per dentist: 250 (GPD/dentist)~~

~~(b) Per wet chair: 200 (GPD/chair)~~

~~Physician's office: 250 (GPD/physician)~~

~~Full service restaurant (350 GPD minimum): 50 (GPD/seat)~~

~~Bar or cocktail lounge: 15 (GPD/seat)~~

~~Fast food restaurant (350 GPD minimum): 35 (GPD/seat)~~

~~Take-out restaurant (350 GPD minimum): 50/100 (GPD/sq. ft.)~~

~~Hotel or motel: 100 (GPD/room)~~

~~Office building: 10/100 (GPD/sq. ft.)~~

~~Motor vehicle service station: 10/100 (GPD/sq. ft.)~~

~~Shopping center (dry uses): 5/100 (GPD/sq. ft.)~~

~~Stadium, racetrack, ballpark: 3 (GPD/seat)~~

~~Store without food service: 5/100 (GPD/sq. ft.)~~

~~Theater:~~

~~(a) Indoor auditorium: 3 (GPD/seat)~~

~~(b) Outdoor drive-in: 5 (GPD/space)~~

~~Camper or trailer park: 150 (GPD/space)~~

~~Banquet halls: 25 (GPD/seat)~~

~~Car wash:~~

~~(a) Recycling type: 750 (GPD/bay)~~

~~(b) Hand type: 3,500 (GPD/bay)~~

~~Coin laundries: 225 (GPD/washer)~~

~~Country clubs: 25 (GPD/member)~~

~~Funeral homes: 10/100 (GPD/sq. ft.)~~



~~Gas station/mini-mart: 450 (GPD/unit)~~

~~Health spa/gyms: 35/100 (GPD/sq. ft.)~~

~~Veterinarian's office:~~

~~(a) Per veterinarian: 250 (GPD/vet)~~

~~(b) With kennels: 30 (GPD/cage)~~

~~Kennels: 30 (GPD/cage)~~

~~Marinas: 40 (GPD/slip)~~

~~Food preparation outlets (bakeries, meat markets, commissaries) (350 GPD minimum): 50 (GPD/sq. ft.)~~

~~Pet grooming:~~

~~(a) Store space: 10/100 (GPD/sq. ft.)~~

~~(b) Per tub: 75 (GPD/tub)~~

*Industrial Land Uses:*

~~Factory without showers: 10/100 (GPD/sq. ft.)~~

~~Factory with showers: 20/100 (GPD/sq. ft.)~~

~~Airport: 5 (GPD/passenger); 10 (GPD/employee)~~

~~House of worship: 3 (GPD/seat)~~

~~Hospital: 250 (GPD/bed)~~

~~Convalescent or nursing home: 150 (GPD/bed)~~

~~Park:~~

~~(a) With toilets only: 5 (GPD/person)~~

~~(b) With showers and toilets: 20 (GPD/person)~~

~~Other residential institution or facility (including adult congregate living units): 100 (GPD/person)~~

~~School:~~

~~(a) Day care/nursery: 5 (GPD/student)~~

~~(b) Regular school: 10 (GPD/student)~~

~~(c) With cafeteria add: 5 (GPD/student)~~

~~(d) With showers add: 5 (GPD/student)~~

~~(e) Teachers and staff: 15 (GPD/person)~~

~~Public swimming facility: 10 (GPD/person)~~

~~Warehouse/industrial speculation building: 20/1000 (GPD/sq. ft.)~~

~~Storage warehouse or mini-warehouse: 5/1000 (GPD/sq. ft.)]]~~

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>>Type of Land Use/Gallons per Day (GPD)

Residential Land Uses:

<u>Single Family Residence</u>	<u>Less than 3001 sq.ft: 220 gpd/unit</u>
	<u>3001-5000 sq.ft: 320 gpd/unit</u>
	<u>More than 5000 sq.ft: 550 gpd/unit</u>
<u>Townhouse Residence</u>	<u>180 gpd/unit</u>
<u>Apartment</u>	<u>150 gpd/unit</u>
<u>Mobile Home Residence/Park</u>	<u>180 gpd/unit</u>
<u>Duplex or Twin Home Residence</u>	<u>180 gpd/unit</u>

Commercial Land Uses:<<

>>Airport:

- (a) Common Area/Concourse 5 gpd/100 sq.ft.
- (b) Retail 10 gpd/100sq.ft.
- (c) Food Service See Restaurant use for allocation<<<sup>2</sup>

>>Banquet Hall 15 gpd/100 sq.ft.

With Kitchen 50 gpd/100 sq.ft.

Bar<< [[and]] >>or Cocktail Lounge 20 gpd/100 sq.ft.

Barber Shop 15 gpd/100 sq.ft.

Beauty Shop 25 gpd/100 sq.ft.

Bowling Alley 100 gpd/lane.<<

[[~~Trailer or Tourist Park 150 gpd/space~~]]

>> Car Wash:

(a) Manual Washing 350 gpd/bay

(b) Automated Washing 5500 gpd/bay

With recycle system Based on system design and evaluation by the Department

Coin Laundry 145 gpd/washer

Country Club 15 gpd/100 sq.ft.

With Kitchen 50 gpd/100 sq.ft.

Dentist's Office 25 gpd/100 sq.ft.

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<sup>2</sup>The differences between the substitute and the original item are indicated as follows: words double stricken through and/or [[double bracketed]] shall be deleted, words double underlined and/or >>double arrowed<< constitute the amendment proposed.

Food Preparation Outlets (Bakeries, Meat

Markets, Commissaries, etc.) 35 gpd/100 sq.ft.

Funeral Home 10 gpd/100 sq.ft. <<

~~[[Gas Station/Convenience store/Mini-Mart 450 gpd/unit~~

~~With single automated car wash add 1750 gpd/unit]]~~

>> Gas Station/Convenience store/Mini-Mart

(a) Without car wash 450 gpd/unit

(b) With single automated car wash 1750 gpd/unit <<

>> Fitness Center or Gym 10 gpd/100 sq.ft. <<

>> Hospital 250 gpd/bed <<

>> Hotel or Motel 100 gpd/room <<

>> House of Worship 10 gpd/100 sq.ft

Industrial:

(a) Warehouse/Spec. Bldg. 1 gpd/100 sq.ft.

(b) Self-service storage units 1.5 gpd/100 sq.ft.

(c) Industrial-Wet 20 gpd/100 sq.ft.

(d) Industrial-Dry 2.5 gpd/100 sq.ft. <<

>> Kennel 15 gpd/cage

Marina 60 gpd/slip

Motor Vehicle Service Station 10 gpd/100 sq.ft. <<

>> Nursing/Convalescent Home 150 gpd/bed <<

>> Office Building 5 gpd/100 sq.ft. <<

>> Other Residential Facility/Institution:

(a) Congregate Living Facility (CLF) 75 gpd/bed

(b) Jail 150 gpd/person

(c) Other 100 gpd/person <<

>> Pet Grooming 55 gpd/100 sq.ft.

Physician's Office 20 gpd/100 sq.ft. <<

>> Public Park:

(a) With toilets only 5 gpd/person

(b) With toilets and showers 20 gpd/person

Public Swimming Pool Facility 30 gpd/person <<

>>Restaurant:

- (a) Full Service \_\_\_\_\_ 100 gpd/100 sq.ft.
- (b) Fast Food \_\_\_\_\_ 50 gpd/100 sq.ft.
- (c) Take Out \_\_\_\_\_ 100 gpd/100 sq.ft.

Retail \_\_\_\_\_ 10 gpd/100 sq.ft.<<

>>School:

- (a) Day Care/Nursery (adults and children) \_\_\_\_\_ 20 gpd/100 sq.ft.
- (b) Regular school \_\_\_\_\_ 12 gpd/100 sq.ft.<<

>>Shopping Center/Mall:

Shell/Common Area \_\_\_\_\_ << [~~5 gpd/100 sq.ft.~~] >> 10 gpd/100 sq.ft. <<

>>Stadium, Ballpark, Racetrack,

Fronton, Auditorium, etc. \_\_\_\_\_ 3 gpd/seat

Theater:

- (a) Indoor \_\_\_\_\_ 3 gpd/seat
- (b) Outdoor \_\_\_\_\_ 5 gpd/space
- (c) Drive-in \_\_\_\_\_ 5 gpd/space<<

>>Trailer or Tourist Park \_\_\_\_\_ 150 gpd/space<<

>>Veterinarian Office \_\_\_\_\_ 20 gpd/100 sq.ft.<<

~~[[**Industrial Land Uses:**~~

~~Airport:~~

- ~~(a) Common Area/Concourse \_\_\_\_\_ 5 gpd/100 sq.ft.~~
- ~~(b) Retail \_\_\_\_\_ 10 gpd/100sq.ft.~~
- ~~(c) Food Service \_\_\_\_\_ See Restaurant use for allocation~~

~~House of Worship \_\_\_\_\_ 10 gpd/100 sq.ft.~~

~~Hospital \_\_\_\_\_ 250 gpd/bed~~

~~Industrial:~~

- ~~(a) Warehouse/Spec. Bldg. \_\_\_\_\_ 1 gpd/100 sq.ft.~~
- ~~(b) Self-service storage units \_\_\_\_\_ 1.5 gpd/100 sq.ft.~~
- ~~(c) Industrial Wet \_\_\_\_\_ 20 gpd/100 sq.ft.~~
- ~~(d) Industrial Dry \_\_\_\_\_ 2.5 gpd/100 sq.ft.~~

~~Nursing/Convalescent Home \_\_\_\_\_ 150 gpd/bed~~

~~Other Residential Facility/Institution:~~

- ~~(a) Congregate Living~~  
~~Facility (CLF) \_\_\_\_\_ 75 gpd/bed~~

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~~(b) Jail 150 gpd/person  
(c) Other 100 gpd/person~~

~~Public Park:~~

~~(a) With toilets only 5 gpd/person  
(b) With toilets and showers 20 gpd/person~~

~~Public Swimming Pool Facility 30 gpd/person~~

~~School:~~

~~(a) Day Care/Nursery(adults and children) 20 gpd/100 sq.ft.  
(b) Regular school 12 gpd/100 sq.ft. ]]~~

Section 3. If any section, subsection, sentence, clause or provision of this ordinance is held invalid, the remainder of this ordinance shall not be affected by such invalidity.

Section 4. It is the intention of the Board of County Commissioners, and it is hereby ordained that the provisions of this ordinance, including any sunset provision, shall become and be made a part of the Code of Miami-Dade County, Florida. The sections of this ordinance may be renumbered or relettered to accomplish such intention, and the word "ordinance" may be changed to "section," "article," or other appropriate word.

Section 5. This ordinance shall become effective ten (10) days after the date of enactment unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

PASSED AND ADOPTED:

Approved by County Attorney as  
to form and legal sufficiency:



Prepared by:



Abbie Raurell Schwaderer

Prime Sponsor: Vice Chairwoman Audrey M. Edmonson