

RESOLUTION NO. 19 - 37

RESOLUTION ESTABLISHING STANDARD SEWER FLOW CALCULATIONS FOR DETERMINING REQUIRED CAPACITY TO SERVE RESIDENTIAL AND NON-RESIDENTIAL LAND USES TO BE SERVED BY PUBLIC SEWER SYSTEMS IN WORCESTER COUNTY, MARYLAND

WHEREAS, the County Commissioners of Worcester County, Maryland (the "Commissioners") have determined that it is desirable to provide for adequate water and sewage capacity for the residents of the County and to allocate water and sewage capacity among current and future developments in a fair and equitable manner in its effort to maintain water and sewerage allocation availability to the community; and

WHEREAS, Title 9, Subtitle 5, of the Environment Article of the Annotated Code of Maryland, enables County comprehensive water and sewerage plans to provide for the orderly expansion of community and multi-use water supply and sewerage system in a manner consistent with applicable County and local comprehensive plans, and the statutory authority and regulatory requirements, as codified in the Code of Maryland Regulations (COMAR) 26.03.03, as from time to time amended, provides the basis for the establishment of allocation policies for water supply and sewerage services; and

WHEREAS, the Commissioners have determined the treatment capacity necessary to serve a single-family residential dwelling unit in each Sanitary Service Area on an Equivalent Dwelling Unit (EDU) basis as established by the Commissioners for each individual Sanitary Service Area; and

WHEREAS, standard sewer flow calculations for proposed residential and non-residential developments assist the County in determining the number of EDUs required to serve the proposed development and ensure that the sale and allocation of EDUs will not exceed the rated capacity of the wastewater treatment plant serving the proposed development; and

WHEREAS, the Commissioners, as the governing body of the Sanitary Service Areas of Worcester County, have determined that the flows for certain specific uses as reflected in Tables I-IV of the Design Guidelines for Wastewater Facilities document authored by the Maryland Department of the Environment (MDE), closely resemble the discharge produced by specific land uses in Worcester County, subject to local amendments; and

WHEREAS, the Commissioners have determined it necessary and appropriate to amend these flow tables to reflect local conditions including referencing established design flows for various land uses in other Maryland jurisdictions, and local experience of actual flows generated by similar existing land uses in Worcester County in order to establish the Standard Sewer Flow Calculations in Worcester County, Maryland;

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the following Policy which includes the attached Standard Sewer Flow Calculations in Worcester County, Maryland is hereby adopted by the Commissioners and shall guide the sale and allocation of EDUs so as not to exceed the rated capacity of the wastewater treatment plant serving the proposed development.

1. CALCULATION OF REQUIRED EDUs

- A. The water and sewer allocation for a single family residential unit shall require one EDU.
- B. For non-residential Uses proposed after January 1, 2020, the number of EDU's required for a project shall be based on the specific use and scope as determined and approved by County staff, in accordance with the provisions of this Resolution. The EDU calculations referenced in this resolution shall not apply to existing non-residential uses for which EDUs have already been assigned.
 - (1) Unless otherwise provided in this Resolution, the calculation of the number of EDUs required for a project shall be based on the Standard Sewer Flow Calculations in Worcester County, Maryland (Flow Table) attached hereto as Attachment A.
 - (2) The calculation of the required EDU's shall result in a whole number. Calculations resulting in a fraction shall be rounded up to the next whole number.

2. OTHER USES AND DISPUTED ALLOCATIONS

- A. If a project or use is not adequately addressed in the Flow Table, County staff from the Departments of Environmental Programs, Public Works, and the Treasurer's Office shall collectively review the use and estimate the capacity required based on available data from MDE, neighboring jurisdictions, local experience, or other similar sources which staff determines to be reputable and acceptable. For any project that has a use that must follow this procedure, the property owner shall be required to enter into an allocation agreement with the County, as specified in Section 3 hereof, that will monitor the EDU usage for a period of twenty-four months following completion of the project, connection to County sanitary services, and commencement of operations.
- B. If a project or use is adequately addressed in the flow table, but the property owner disputes the projected sewer flows per unit of measure as shown in the flow table for the proposed use, the property owner may request a review of the projected sewer flows. Property owner must submit data to support a lower projected sewer flow. Relevant data may include but is not limited to official water bills and meter readings from verifiable sources for the same use in a different jurisdiction with the same demographic profile as Worcester County, manufacturer's equipment data sheets and specifications, engineering reports and studies for specific processes and equipment unique to the particular applicant's use or business model. County staff from the Departments of Environmental Programs, Public Works, and the Treasurer's Office shall collectively review the use, available data from MDE, neighboring jurisdictions, local experience, and the supplied data to determine if a lower EDU allocation is acceptable.
 - 1. If a lower EDU allocation is agreeable to the County, the property owner can accept the lower allocation contingent upon the conditions of the allocation agreement as specified in Section 3 hereof.
 - 2. If a lower EDU allocation cannot be agreed to as requested by the property owner, the property owner is still able to enter into an allocation agreement if desired, however, the EDU allocation listed in the agreement will be the EDU allocation that the County determined to be appropriate and shall be contingent upon the conditions of the allocation agreement as specified in Section 3 hereof.

3. **ALLOCATION AGREEMENTS**

- A. Allocation agreements shall be required where a project or use is not adequately addressed in the flow table or where a project or use is adequately addressed in the flow table, but the property owner disputes the projected sewer flows per unit of measure as shown in the flow table for the proposed use. An allocation agreement shall be subject to the following:
1. The property owner shall enter into an allocation agreement with the County that will document the number of EDUs agreed to and monitor the sewer flows daily for a period of twenty-four months following completion of the project, connection to County sanitary services, and commencement of operations.
 2. The relevant project must be operating at no less than 95% of its permitted occupancy.
 3. A meter shall be installed at the property at the property owner's expense.
 4. The property owner shall pay a non-refundable five hundred (\$500) meter monitoring fee.
 5. The property owner shall pay in full for the number of EDUs in the agreement.
 6. If in the 24 months, the daily sewer flow over any three consecutive days or any ten individual days exceeds the EDU allocation specified in the allocation agreement, then the property owner is required to immediately purchase in full the additional EDUs being used. Property owner shall pay any usage charges that may have escaped since the account was placed in service. If additional EDUs are not available as determined by the County, the property owner shall take all necessary steps to reduce their flow below the allocated limits. All flows must be reduced to the allocated flows within 90 days of notice of the results of the 24-month monitoring period.
 7. If in the 24 months, the highest daily sewer flow over any three consecutive days or the highest daily sewer flow for any ten individual days is less than the EDU allocation specified in the allocation agreement, then the County shall be required to refund the initial purchase price of the additional EDUs to the property owner and the property owner forfeits said EDUs to the County. The calculation of the required EDUs to be refunded shall result in a whole number. Calculations resulting in a fraction shall be rounded up to the next whole number. No other costs or fees associated with the EDUs shall be refunded.
- B. The allocation agreement shall include all terms and conditions deemed necessary by the County.

4. **PROCEDURE**

The initial determination of required EDUs will be made by the Department of Environmental Programs in their review of either a permit for construction of improvements or in conjunction with site plan review. Requirements will be determined utilizing the attached Flow Table and recorded by the department on a Flow Calculation Worksheet to be distributed to the Worcester County Sewer Committee and placed in the property/project file. No County building permit shall be issued for the project until the required EDUs have been purchased as confirmed by the County Treasurer's Office.

5. **RECORD-KEEPING AND DOCUMENTATION**

The Department of Environmental Programs shall maintain Flow Calculation Worksheet showing the calculations and project title which shall be maintained in the property/project file. These records shall also include any special determinations and decisions reached for flows not specifically listed in the attached Flow Table.

6. **AMENDMENTS TO THE FLOW TABLE**

The Commissioners reserve the right to periodically review the Flow Table to determine if additions or modifications are necessary. Such additions or modifications shall be adopted by resolution of the Commissioners following a public hearing and shall be in effect for future developments thereafter, but shall not apply to any allocations for existing development.

7. **NATURE OF ALLOCATION**

Nothing herein or action taken hereunder shall constitute a commitment for sewer service by the County which shall at all times be subject to the available capacity and conditions at the time of application for service.

AND, BE IT FURTHER RESOLVED that this Resolution shall take effect upon its passage.

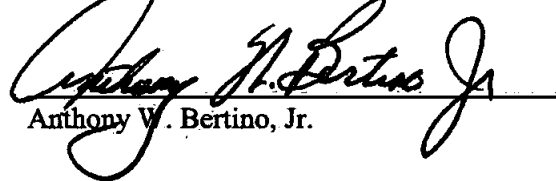
PASSED AND ADOPTED this 3rd day of December, 2019.

ATTEST:

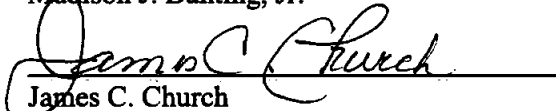


Harold L. Higgins
Chief Administrative Officer

COUNTY COMMISSIONERS OF
WORCESTER COUNTY, MARYLAND



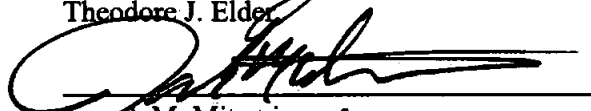
Madison J. Bunting, Jr.



James C. Church



Theodore J. Elder



Joseph M. Mitrecic



Joshua C. Nordstrom



Diana Purnell

**Standard Sewer Flow Calculations
in Worcester County, Maryland**

Attachment A

Table A	
Flow Projection Based Upon Gallons Per Day (gpd) Per Person	
Type of Establishment	Gallons Per Day (gpd) Per Person
	(Unless otherwise noted)
Airports (per passenger + 15 gpd per employee)	5
Auditorium or Assembly Hall (per seat)	3
Boarding houses (per room)	100
Camps: Campground with central comfort stations (per campsite)	70
Camps: Luxury camps with water/sewer hook-ups (per campsite)	100
Country clubs (based on rated capacity)	50
Church (per seat) + additional flow for accessory uses	3
Daycare (per student and teacher)	15
Factories (gallons per person, per shift, exclusive of industrial wastes)	25
Golf Course - 18 holes with limited service snack bar (per course)	3,500
Golf Course - 9 holes with limited service snack bar (per course)	1,500
Hospitals (per bed space)	350
Institutions other than hospitals (per bed space)	130
Marina pump out (per slip)	35
Mobile home parks (1 EDU per space)	1 EDU
Schools: Boarding	100
Schools: Day, without gyms, cafeterias or showers	15
Schools: Day, with gyms, cafeterias and showers	30
Schools: Day, with cafeterias, but without gyms or showers	20
Stable, Commercial Riding (per horse)	8
Tasting Room - for winery, brewery - no food service - (minimum)	400
Theaters: Indoor (per auditorium seat)	3
Footnote: Number of persons is calculated by the occupant load as determined by the County Building Code.	

Table B	
Flow Projections for Specific Uses	
Based on Building Area in Gross Square Feet	
Type of Establishment	Projected Flow by Area
Accupuncture/massage	Gross Sq. Ft. x 0.10 = gpd
Amusement Park	Gross Sq. Ft. of site x 0.008 = gpd
Arcades	Gross Sq. Ft. x 0.10 = gpd
Banks	Gross Sq. Ft. x 0.05 = gpd
Barber Shops	Gross Sq. Ft. x 0.20 = gpd
Beauty Salons	Gross Sq. Ft. x 0.35 = gpd
Conference Room/Meeting Room	Gross Sq. Ft. x 0.50 = gpd
Contractor's Shop	Gross Sq. Ft. x 0.04 = gpd
Convenience Store	Gross Sq. Ft. x 0.05 = gpd
Day Spa	Gross Sq. Ft. x 0.35 = gpd
Department Store with food service	Gross Sq. Ft. x 0.08 = gpd
Drug Stores (with pharmacy, no food service)	Gross Sq. Ft. x 0.13 = gpd
Funeral Homes	Gross Sq. Ft. x 0.45 = gpd
Gym - with Showers	Gross Sq. Ft. x 0.20 = gpd
Gym - no Showers	Gross Sq. Ft. x 0.10 = gpd
Hotels and Motels	Gross Sq. Ft. x 0.25 = gpd
Laundries & Cleaners	Gross Sq. Ft. x 0.31 = gpd
Medical Dialysis Centers	Gross Sq. Ft. x 1.00 = gpd
Medical Office Buildings - offices only	Gross Sq. Ft. x 0.10 = gpd
Medical Surgery Centers	Gross Sq. Ft. x 0.60 = gpd
Office Buildings	Gross Sq. Ft. x 0.09 = gpd
Swimming pools: 3 to 5-feet deep	Gross Sq. Ft. x 0.83 = gpd
Swimming pools: greater than 5-feet deep	Gross Sq. Ft. x 0.67 = gpd
Retail Stores	Gross Sq. Ft. x 0.05 = gpd
Restaurants, Bars and Lounges	Gross Sq. Ft. x 1.00 = gpd
- Restaurants - Carry-out only	Gross Sq. Ft. x 0.50 = gpd
Service Stations - full service garage	Gross Sq. Ft. x 0.18 = gpd
Supermarkets	Gross Sq. Ft. x 0.20 = gpd
Warehouses	Gross Sq. Ft. x 0.03 = gpd

<u>Table C</u>	
Flow Projection for Country Clubs	
<u>Type of Fixture Gallons Per Day</u>	<u>Per Fixture</u>
Baths	300
Showers	500
Sinks	50
Toilets	150
Urinals	100

<u>Table D</u>	
Flow Projection for Public Parks	
(During hours when park is open)	
<u>Type of Fixture</u>	<u>Gallons Per Day (gpd) Per Fixture</u>
Faucets	15
Flush toilets	35
Showers	100
Urinals	10

Adapted from flow tables provided in "MDE Guidance Document, Wastewater Capacity Management Plans, 2006" with local amendments, from "Design Guidelines for Wastewater Facilities," Maryland Department of the Environment – Engineering and Capital Projects Program, 2012 and "Design Guidelines for Sewerage Facilities; Technical Bulletin M-DHMH-EHA-S-001," Environmental Health Administration, Department of Health and Mental Hygiene, State of Maryland, 1978 Edition.

EDU Allocation Worksheet



Project:
Tax Map:
Parcel:
Lot:
Tax ID:

Use Description	Allocation Rate	Estimated Quantity (sf)	EDU Flow per Gal	EDU Total
<u>Common uses:</u>				
General Office	0.09	0.00	300	0
Retail	0.05	0.00	300	0
Contractors Shops	0.04	0.00	300	0
Medical and Dental Offices	0.10	0.00	300	0
Carry Out (non-public food prep area)	0.50	0.00	300	0
Restaurants	1.00	0.00	300	0
Additional use (not listed above)	0.00	0.00	300	0
Total EDU Projection				0

Notes:

1. Enter building size in quantity.

Date Approved: _____

Approved By: _____