

Explanation of Rationale Used to Determine High Flow Users Relative to “Mixed-use” Metering

The WSSC Pipeline Design Manual Tables 19.a & 19.c were identified as a baseline tool that could be utilized to establish a comparison of anticipated demand for a specified commercial usage to that of a typical residential unit.

Selected establishment types (column I) were copied from 19.c to a spreadsheet along with their Unit of Measure (column II) and corresponding average water flow factor (column III).

Column IV simply declares the flow demand for a typical residential unit to be 300 gallons per day (gpd). This is found in Table 19.a.

Column V is a calculation derived from dividing 300 gallons per day (gpd) by the flow factor (column III) for each of the establishment types. The result is a baseline defined by the relative unit of measure for the given use. (Resulting example 2000 sq. ft = 300gpd)

Column VI establishes a reasonable average size establishment, for each use, based on a fair assessment of a preponderance of plans, as historically submitted to WSSC plumbing plans review office.

Column VII compares column VI to column V. Where column VI is greater, the flow is expected to be greater than 300gpd and therefore exceeds the anticipated flow of a typical residential unit. In these cases, the specific establishment will be considered a high flow user and will require separate metering.

**Table of High Flow Units Based on WSSC Pipeline Design Manual Table 19c
Titled "Development Flow Factors - By Specific Use"**

I	II	III	IV	V	VI			VII	
Establishment	Unit of Measure	AWF ¹ equals Gallons per Day per Unit of Measure	Average Daily Water Use by a Typical Residential Unit per PDM Table 19a	Unit of Measure Equaling 300gpd		Reasonable Average Size of Establishment			Is Column VI Greater than Column V? If Yes, Establishment Requires Separate Metering
Assembly Halls/Community Center	Num. of Seats	2.88	300 Gallons divided by AWF =	104	seats	10 rows of 16 seats =	160	seats	YES
Auto Dealership	Gross sq. ft.	0.112	300 Gallons divided by AWF =	2679	sq. ft.	100'x100' =	10,000	sq. ft.	YES
Bakery	Gross sq. ft.	0.216	300 Gallons divided by AWF =	1389	sq. ft.	40'x50' =	2,000	sq. ft.	YES
Bank	Gross sq. ft.	0.063	300 Gallons divided by AWF =	4762	sq. ft.	40'x50' =	2,000	sq. ft.	NO
Barber Shop	Gross sq. ft.	0.288	300 Gallons divided by AWF =	1042	sq. ft.	20'x50' =	1,000	sq. ft.	NO
Beauty Salon/Nails/Spa	Gross sq. ft.	0.504	300 Gallons divided by AWF =	595	sq. ft.	30'x50' =	1,500	sq. ft.	YES
Car Wash (automatic or self serve)	Gross sq. ft.	7.056	300 Gallons divided by AWF =	43	sq. ft.	24'x50' =	1,200	sq. ft.	YES
Carry-out	Gross sq. ft.	0.288	300 Gallons divided by AWF =	1042	sq. ft.	25'x60' =	1,500	sq. ft.	YES
Church	Num. of Seats	5.76	300 Gallons divided by AWF =	52	seats	10 rows of 16 seats =	160	seats	YES
Hotel/Motel/Inn	Gross sq. ft.	0.368	300 Gallons divided by AWF =	815	sq. ft.	6 rooms of 20'x30' =	3,600	sq. ft.	YES
Laundry/Dry Cleaner	Gross sq. ft.	0.466	300 Gallons divided by AWF =	644	sq. ft.	30'x50' =	1,500	sq. ft.	YES

¹AWF = Average Water Flow

I	II	III	IV	V		VI			VII
Establishment	Unit of Measure	AWF ¹ equals Gallons per Day per Unit of Measure	Average Daily Water Use by a Typical Residential Unit per PDM Table 19a	Unit of Measure	Equaling 300gpd	Reasonable Average Size of Establishment			Is Column VI Greater than Column V? If Yes, Establishment Requires Separate Metering
Laundromat	Gross sq. ft.	5.29	300 Gallons divided by AWF =	57	sq. ft.	40'x50'=	2,000	sq. ft.	YES
Laboratory/Office Facility	Gross sq. ft.	0.24	300 Gallons divided by AWF =	1250	sq. ft.	40'x50'=	2,000	sq. ft.	YES
Library	Gross sq. ft.	0.144	300 Gallons divided by AWF =	2083	sq. ft.	60'x50'=	3,000	sq. ft.	YES
Medical Office	Gross sq. ft.	0.216	300 Gallons divided by AWF =	1389	sq. ft.	25'x40'=	1,000	sq. ft.	NO
Nursing Home/Hospital	Num. of Beds	187	300 Gallons divided by AWF =	2	beds	50 rooms=	50	beds	YES
Office Space	Gross sq. ft.	0.133	300 Gallons divided by AWF =	2256	sq. ft.	40'x50'=	2,000	sq. ft.	NO
Pool	User	8.64	300 Gallons divided by AWF =	35	users	63'x80'=	100	users	YES
Racket Club/Tennis Club/Gym	User	71.94	300 Gallons divided by AWF =	4	users	40'x50'=	10	users	YES
Restaurant	Num. of Seats	34.8	300 Gallons divided by AWF =	9	seats	50 seats=	50	seats	YES
Retail Store	Gross sq. ft.	0.069	300 Gallons divided by AWF =	4348	sq. ft.	40'x50'=	2,000	sq. ft.	NO
Service Station/Repair Garage	Gross sq. ft.	0.259	300 Gallons divided by AWF =	1158	sq. ft.	40'x50'=	2,000	sq. ft.	YES
Supermarket/Market	Gross sq. ft.	0.288	300 Gallons divided by AWF =	1042	sq. ft.	40'x50'=	2,000	sq. ft.	YES
Theater	Num. of Seats	1.44	300 Gallons divided by AWF =	208	seats	300 seats=	300	seats	YES