



## GLOBAL WATER RESOURCES (“GLOBAL WATER”)

### DESIGN STANDARD

#### DETERMINATION OF CAPACITY IMPACT FROM COMMERCIAL UNITS

##### APPLICATION

This Design Standard defines the methodology employed to determine the impact of commercial customers on the water supply, distribution, and wastewater collection, treatment and disposal operations.

The Design Standard applies to any non-residential customer and to other establishments or users that the Global Water engineer has determined the impact will be greater than a residential customer.

##### METHODOLOGY

In order to assess the impact of a commercial operation on Global Water’s supply and treatment infrastructures, Global Water employs a fixture unit (FU) review as compared to a typical residential unit. This analysis ensures that the peak water and wastewater demands are accounted for, and a proper allocation of resources. Fixture unit allocations are developed from the Unified Plumbing Code (UPC). In cases where no direct FU allocation exists in the UPC, the Global Water engineer will assign a value.

The total FU count is compared to the typical residential fixture unit counts to determine the Equivalent Development Unit (EDU) value, which is used for determining capacity fees, hook-up fees and other impact-related metrics used by Global Water in maintaining its Capacity Management and Operations Management Plan.

For the purposes of this Design Standard, the following Residential Fixture Unit values are employed:

<b>Residential</b>	<b>Fixture Unit (FU)</b>
Water Use	46
Sewer Use	44



An example of this calculation is shown in the accompanying table:

Item	FU's	COMMERCIAL WATER		COMMERCIAL SEWER	
		Number	Total (Water)	Number	Total Sewer
Urinals Stall/Wall	4	2	8	2	8
Pedestal/Siphon	12				
Sinks					
Bar	2				
Industrial Wash-Up	6	0	0	0	0
Kitchen	4	2	8	2	8
Lavatory	2	6	12	6	12
Showers	4				
Floor Drains	4			3	12
Grease & Solids	6				
Dishwashers					
Conveyor	100				
Under Counter Residential	10	1	10	1	10
Disposals	8				
50					
Clothes Washer					
Residential	4				
Automatic 8 lb	16				
Automatic 12-19 lb	20				
Automatic 20-39 lb	22				
Automatic 40-50 lb	24				
Drinking Fountains	2	2	4	2	4
Water Closet					
Tank	8				
Flush Valve	12	6	72	6	72
Hose Bibs	2	2	4		
Landscaping	12 /1000 sq ft	250	3		
Swimming Pool	5 /100 sq ft	6550	327.5		
Swimming Pool Filter Backwash	10			1	10
Cooling Water	15 /ton				
	<b>TOTAL</b>	<u><u>448.5</u></u> FU's		<u><u>136</u></u> FU's	
	Factor	9.75		3.09	

In this case, the impact of the Commercial Customer is equivalent to 9.75 residential units with respect to water, and 3.09 residential units with respect to sewer.

### COMMERCIAL APPLICANT REQUIREMENTS

Prior to applying for water service, a non-residential customer shall provide plans of the proposed structure in sufficient detail for Global Water to analyze the impact.