

**Table 11.4.1  
DRAINAGE FIXTURE UNIT (DFU) VALUES**

<b>HEAVY-USE ASSEMBLY</b>			
<b>OTHER THAN DWELLING UNITS</b>			
<b>SERVING 3 OR MORE DWELLING UNITS</b>			
<b>INDIVIDUAL DWELLING UNITS</b>			
<b>BATHROOM GROUPS HAVING 1.6 GPF GRAVITY-TANK WATER CLOSETS</b>			
Half-Bath or Powder Room	3	2	
1 Bathroom Group	5	3	
1-1/2 Bathrooms	6		
2 Bathrooms	7		
2-1/2 Bathrooms	8		
3 Bathrooms	9		
Each Additional Half-Bath	0.5		
Each Additional Bathroom Group	1		
<b>BATHROOM GROUPS HAVING 1.6 GPF PRESSURE-TANK WATER CLOSETS</b>			
Half-Bath or Powder Room	3.5	2.5	
1 Bathroom Group	5.5	3.5	
1-1/2 Bathrooms	6.5		
2 Bathrooms	7.5		
2-1/2 Bathrooms	8.5		
3 Bathrooms	9.5		
Each Additional Half-Bath	0.5		
Each Additional Bathroom Group	1		
<b>BATHROOM GROUPS HAVING 3.5 GPF (or higher) GRAVITY TANK WATER CLOSETS</b>			
Half-Bath or Powder Room	3	2	
1 Bathroom Group	6	4	
1-1/2 Bathrooms	8		
2 Bathrooms	10		
2-1/2 Bathrooms	11		
3 Bathrooms	12		
Each Additional Half-Bath	0.5		
Each Additional Bathroom Group	1		
<b>BATH GROUP (1.6 GPF Flushometer Valve)</b>	5	3	
<b>BATH GROUP (3.5 GPF Flushometer Valve)</b>	6	4	

**Table 11.4.1 (Continued)**  
**DRAINAGE FIXTURE UNIT (DFU) VALUES**

.HEAVY-USE ASSEMBLY				
OTHER THAN DWELLING UNITS				
SERVING 3 OR MORE DWELLING UNITS				
INDIVIDUAL DWELLING UNITS				
INDIVIDUAL FIXTURES				
Bathtub or Combination Bath/Shower, 1-1/2" Trap	2	2		
Bidet, 1-1/4" Trap	1	1		
Clothes Washer, Domestic, 2" Standpipe	3	3	3	
Dishwasher, Domestic, with Independent Drain	2	2	2	
Drinking Fountain or Watercooler			0.5	
Food-Waste-Grinder, Commercial, 2" Min Trap			3	
Floor Drain, Auxiliary			0	
Kitchen Sink, Domestic, with One 1-1/2" Trap	2	2	2	
Kitchen Sink, Domestic, with Food-Waste-Grinder	2	2	2	
Kitchen Sink, Domestic, with Dishwasher	3	3	3	
Kitchen Sink, Domestic, with Grinder and Dishwasher	3	3	3	
Laundry Sink, One or Two Compartments, 1-1/2" Waste	2	2	2	
Laundry Sink, with Discharge from Clothes Washer	2	2	2	
Lavatory, 1-1/4" Waste	1	1	1	1
Mop Basin, 3" Trap			3	
Service Sink, 3" Trap			3	
Shower Stall, 1-1/2" Trap	2	2	2	
Shower Stall, 2" Trap	2	2	2	
Showers, Group, per Head (Continuous Use)			5	
Sink, 1-1/2" Trap	2	2	2	
Sink, 2" Trap	3	3	3	
Sink, 3" Trap			5	
Trap Size, 1-1/4" (Other)	1	1	1	
Trap Size, 1-1/2" (Other)	2	2	2	
Trap Size, 2" (Other)	3	3	3	
Trap Size, 3" (Other)			5	
Trap Size, 4" (Other)			6	
Urinal, 1.0 GPF			4	5
Urinal, Greater Than 1.0 GPF			5	6
Wash Fountain, 1-1/2" Trap			2	
Wash Fountain, 2" Trap			3	
Wash Sink, Each Set of Faucets			2	

<b>Table 11.4.1 (Continued)</b>				
<b>DRAINAGE FIXTURE UNIT (DFU) VALUES</b>				
<b>HEAVY-USE ASSEMBLY</b>				
<b>OTHER THAN DWELLING UNITS</b>				
<b>SERVING 3 OR MORE DWELLING UNITS</b>				
<b>INDIVIDUAL DWELLING UNITS</b>				
Water Closet, 1.6 GPF Gravity or Pressure Tank	3	3	4	6
Water Closet, 1.6 GPF Flushometer Valve	3	3	4	6
Water Closet, 3.5 GPF Gravity Tank	4	4	6	8
Water Closet, 3.5 GPF Flushometer Valve	4	4	6	8
Whirlpool Bath or Combination Bath/Shower, 1-1/2" Trap	2	2		

**NOTES FOR TABLE 11.4.1:**

1. A Bathroom Group, for the purposes of this Table, consists of not more than one water closet, up to two lavatories, and either one bathtub, one bath/shower combination, or one shower stall. Other fixtures within the bathing facility shall be counted separately to determine the total drainage fixture unit load.
2. A Half-Bath or Powder Room, for the purposes of this Table, consists of one water closet and one lavatory.
3. For unlisted fixtures, refer to a listed fixture having a similar flow and frequency of use.
4. When drainage fixture unit (DFU) values are added to determine the load on the drainage system or portions thereof, round the sum to the nearest whole number before referring to Tables 11.5.1A, 11.5.1B, or 12.16.6A for sizing the drainage and vent piping. Values of 0.5 or more should be rounded up to the next higher whole number (9.5 = 10 DFU). Values of 0.4 or less should be rounded down to the next lower whole number (9.4 = 9 DFU).
5. "Other Than Dwelling Units" applies to business, commercial, industrial, and assembly occupancies other than those defined under "Heavy-Use Assembly." Included are the public and common areas in hotels, motels, and multi-dwelling buildings.
6. "Heavy-Use Assembly" applies to toilet facilities in occupancies that place heavy, but intermittent, time-based loads on the drainage system, such as; schools, auditoriums, stadiums, race courses, transportation terminals, theaters, and similar occupancies where queuing is likely to occur during periods of peak use.
7. Where other than water-supplied fixtures discharge into the drainage system, allow 2 DFU for each gallon per minute (gpm) of flow. (See Section 11.4.2.)

**11.4.3 Diversity Factors**

In certain structures such as hospitals, laboratory buildings, and other special use or special occupancy buildings where the ratio of plumbing fixtures to occupants is proportionally more than required by the building occupancy and in excess of 1,000 drainage fixture units, the Authority Having Jurisdiction may permit the use of a diversity factor for sizing branches, stacks, building drains, and building sewers.

**11.5 DETERMINING DRAINAGE PIPE SIZES**

**11.5.1 Selecting the Size of Drainage Piping**

Pipe sizes shall be determined from Table 11.5.1A and 11.5.1B on the basis of the drainage fixture unit load (DFU) computed from Table 11.4.1 and Section 11.4.1. Sanitary drainage pipe sizes shall not be reduced in the direction of flow.

EXCEPTION: Drain pipe sizes for individual fixtures shall be not less than the minimum trap size required in Section 5.2.