General Facilities Charges

FCS GROUP
Solutions-Oriented Consulting

June 26, 2023

Sewer GFC

Spokane County Review

Sewer GFC - Existing Cost Adjustment

Description	Treatment & Collection
Existing Cost Basis Charged to Users	$149.8M
Less: County Adjustment	($12.6M)
Revised Cost Basis Charged to Users	**$137.2M**

- Adjustments made for 1981 County payment and most recent County invoices
- Revisions to residual cost basis result in $12.6M reduction
- Reminder: Only 18-20% of existing assets are included in the charge

Sewer GFC – Revised Charge

Description	MCE Basis	ERU Basis
Sewer GFC before Adjustment	$7,461	$7,000*
Sewer GFC after Adjustment	$6,863	$6,400*
Difference	**($598)**	**($600)**

- *Reminder: Sewer ERU values are estimates, updated data needed
- No shared future capital projects have been included in the charge
- If shared future capital projects are included in future charge calculations, projected County contributions will need to be removed

Water GFCs - Review

Meter Size	Adopted Low Zone March 2024	Low Zone – No Interest	Adopted Upper Zone March 2024	Upper Zone –No Interest	City-Wide Calculated Charge	City-Wide Calculated Charge – No Interest
¾ inch	**$2,823**	$2,281	**$10,407**	$9,635	$4,881	$4,285
1 inch	**$4,705**	$3,802	**$17,345**	$16,059	$8,135	$7,141
1.5 inch	**$9,409**	$7,604	**$34,690**	$32,117	$16,269	$14,282
2 inches	**$15,055**	$12,167	**$55,503**	$51,387	$26,031	$22,851
3 inches	**$32,932**	$26,615	**$121,413**	$112,410	$56,943	$49,987
4 inches	**$56,455**	$45,625	**$208,137**	$192,703	$97,617	$85,692
6 inches	**$127,025**	$102,657	**$468,309**	$433,582	$219,638	$192,808
8 inches	To be calc.	To be calc.	To be calc.	To be calc.	To be calc.	To be calc.
10 inches	To be calc.	To be calc.	To be calc.	To be calc.	To be calc.	To be calc.

Revised Wastewater GFCs

Meter Size	Revised Wastewater GFC	Revised Wastewater – No Interest
¾ inch	**$6,863**	**$5,085**
1 inch	**$11,438**	**$8,476**
1.5 inch	**$22,877**	**$16,951**
2 inches	**$36,603**	**$27,122**
3 inches	**$80,069**	**$59,330**
4 inches	**$137,262**	**$101,709**
6 inches	**$308,839**	**$228,844**
8 inches	To be calc.	To be calc.
10 inches	To be calc.	To be calc.

GFC Calculated Both Ways

GFC for 3/4" Meter – UPPER ZONE

Basis	Water GFC	Sewer GFC
MCE Basis	$10,407	$6,863
ERU Basis	$10,285	$6,400
Difference	1.2%	7.2%

GFC for 3/4" Meter – LOWER ZONE

Basis	Water GFC	Sewer GFC
MCE Basis	$2,823	$6,863
ERU Basis	$2,790	$6,400
Difference	1.2%	7.2%

All calculations include the same costs per zone, but they are divided by different number of units.

GFC Calculated Both Ways – Single Zone

GFC for 3/4" Meter

Basis	Water GFC	Sewer GFC
MCE Basis	**$4,881**	$6,863
ERU Basis	**$4,824**	$6,400
Difference	**1.2%**	7.2%

All calculations include the same costs per zone, but they are divided by different number of units.

What About 5/8” Meters

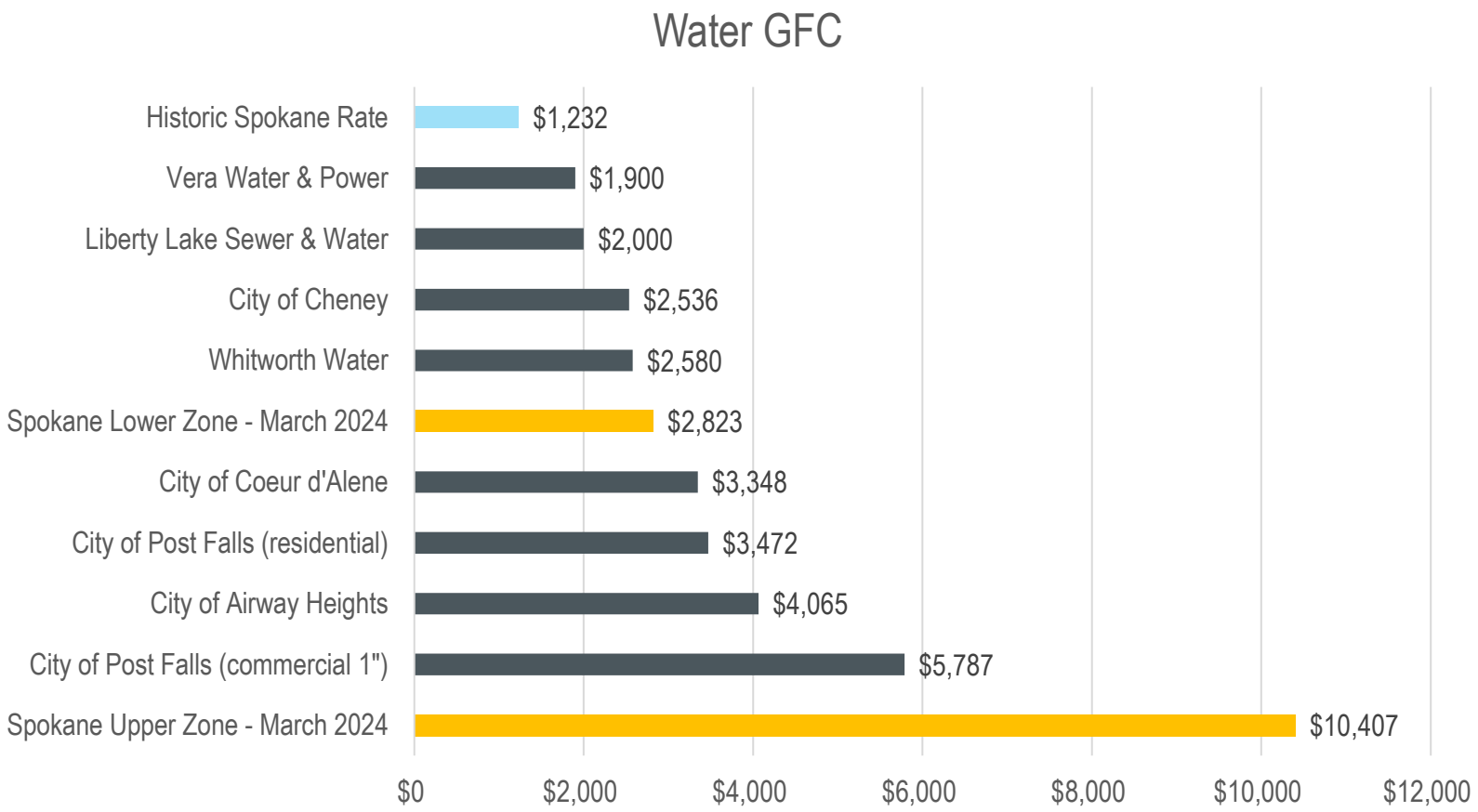
- 5/8” Meters Could be Appropriate in Certain Situations:
  - Spokanescape implemented
  - Smaller lot size
  - Smaller home size

5/8” Meter Would Cost Less

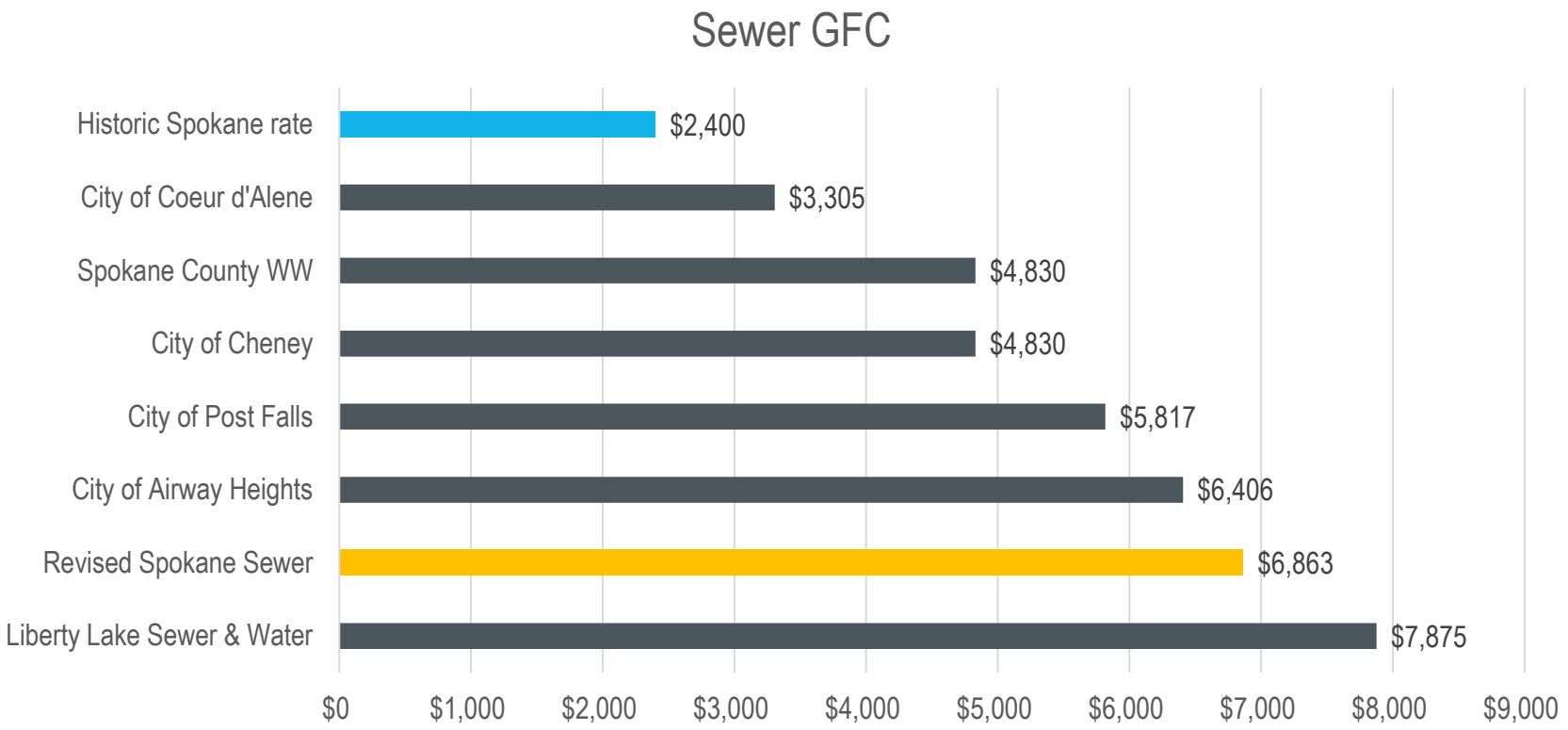
Meter Size	Water Lower Zone	Water Upper Zone	Revised Sewer
5/8” inch	$1,882	$6,938	$4,575
3/4” inch	$2,823	$10,407	$6,863

Water - City Wide
$3,254
$4,881

Water Local GFC Comparison



Sewer Local GFC Comparison



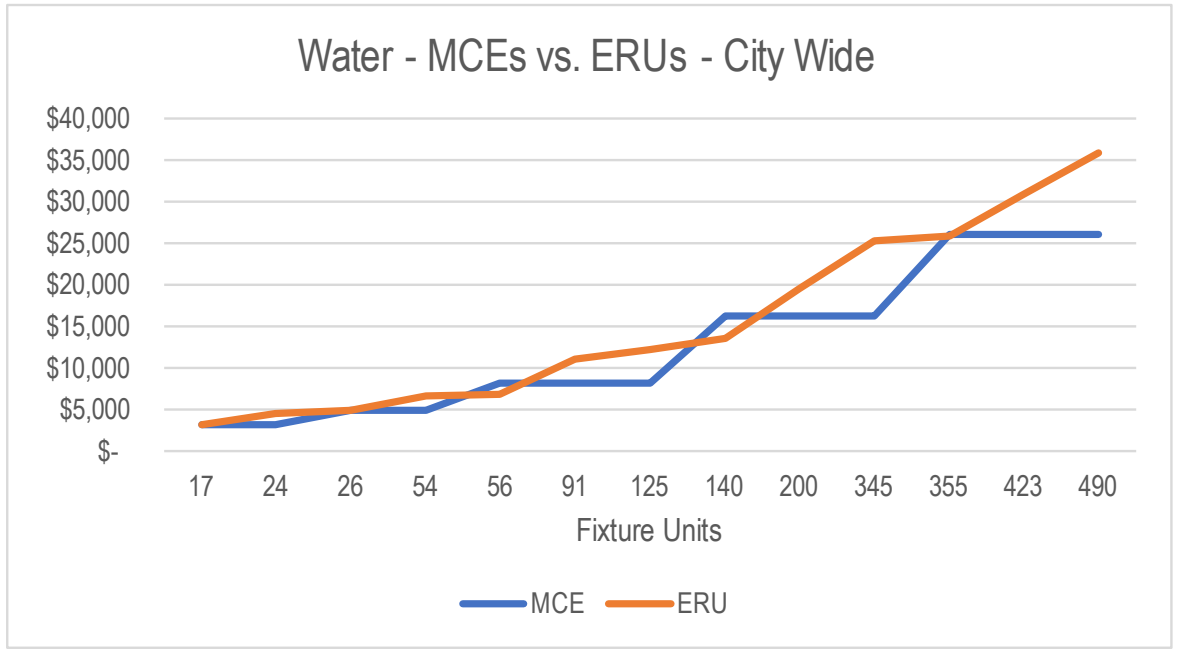
MCE vs ERU

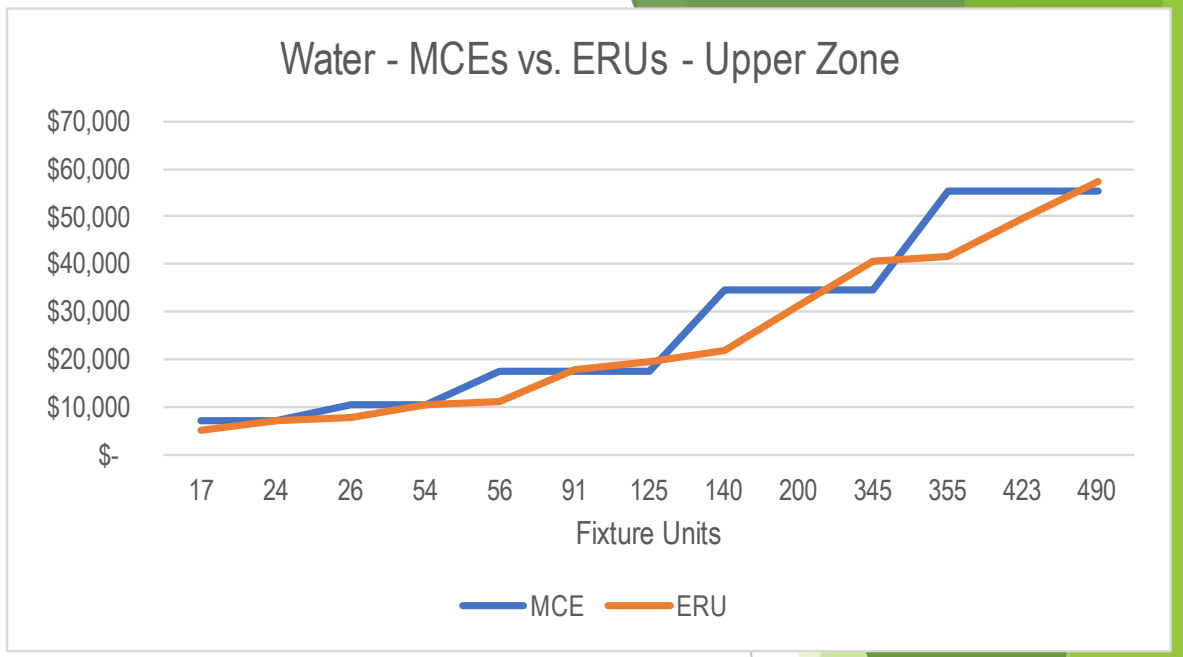
- Both approaches require an understanding (a calculation) of the Maximum Daily Demand (MDD) that the development will need as a starting point.

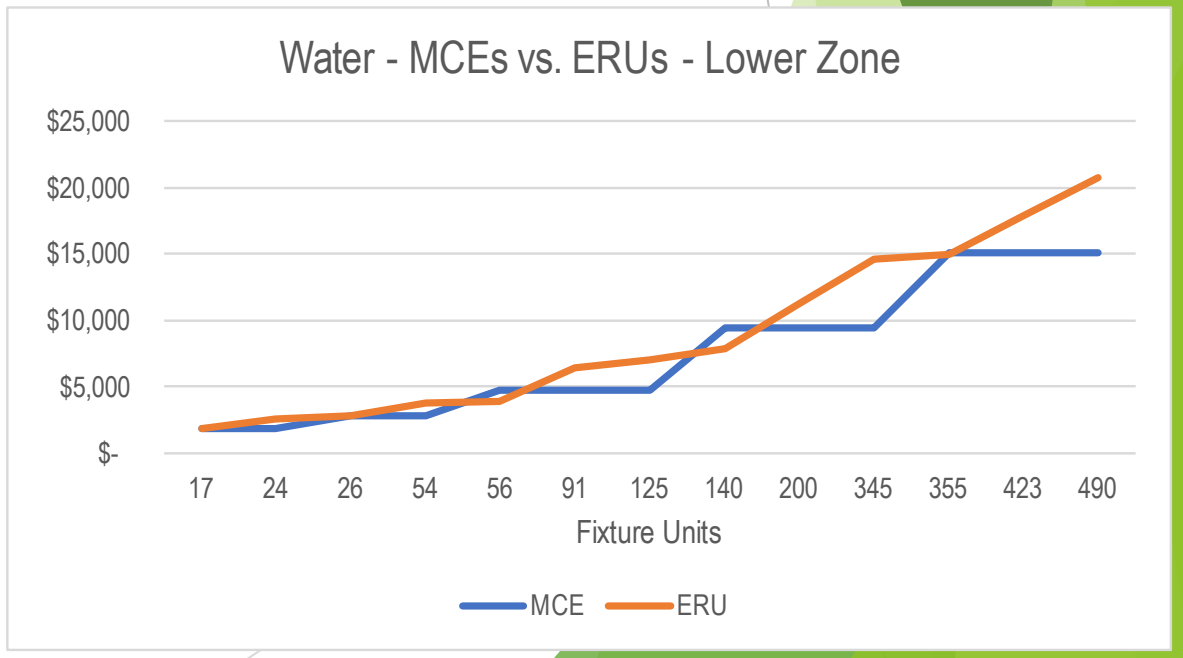
- the MCE approach develops a GFC based on average MDD for each meter size. For example, a ¾" meter can produce a maximum of 30 gpm, some may only use 22 gpm as their max use, some may use the max at 30 gpm. An MCE based charge is the same for each given meter size, regardless of whether the new user uses more or less than the average MDD.

- The ERU approach also requires calculating the Maximum Daily Demand (MDD) that is expected for the development. The MDD is then compared to the value of one ERU (1100 gpd) and the charge is calculated by dividing the MDD by the ERU definition to determine the number of ERUs in the development. The resulting charge reflects a proportionate share of the GFC amount based on the specific MDD of the development.

Stair Stepped V.S. Linear







Change of use, ADU examples on MCE's and ERU's

- Existing home adding an ADU
  - MCE- If the existing meter can handle the new use no GFC charge
    - If the meter needs to be upsized, then the GFC is the difference in cost from the existing to the new meter needed
  - ERU – An additional residential unit would have a new GFC charge.
    - Would expect a portion of an ERU based on factors such as dwelling and property size.
- Existing building altered office to residential (Commercial Development):
  - MCE- If the existing meter can handle the new use no GFC charge
    - If the meter needs to be upsized, then the GFC is the difference in cost from the existing to the new meter needed
  - ERU – existing use is calculated as MDD and future use MDD calculated, the difference would be charged a proportionate share of an ERU.

Looking for Feedback:

- **Methodology**
  - Meter Capacity Equivalents OR Equivalent Residential Units
- **Water GFC – Two zones or one?**
- **Accounting for Interest on existing facilities**
- **5/8” option**
- **Growth v. Rates?**
- **Phase-in Approaches**
- **Supporting certain development?**

Discussed Items..

- **Understanding the Calculation** ✓
  - Growth Projections – SRTC model ✓
  - Capital Planning – What's included? ✓

Next Steps:

- Formal written comments received by **Sept 15th** for Plan Commission packet.
- Plan Commission Workshop **end of September**
- Plan Commission Hearing **October 25th**
- **We will keep this committee informed prior to each next step**

Thank you for your time and input!

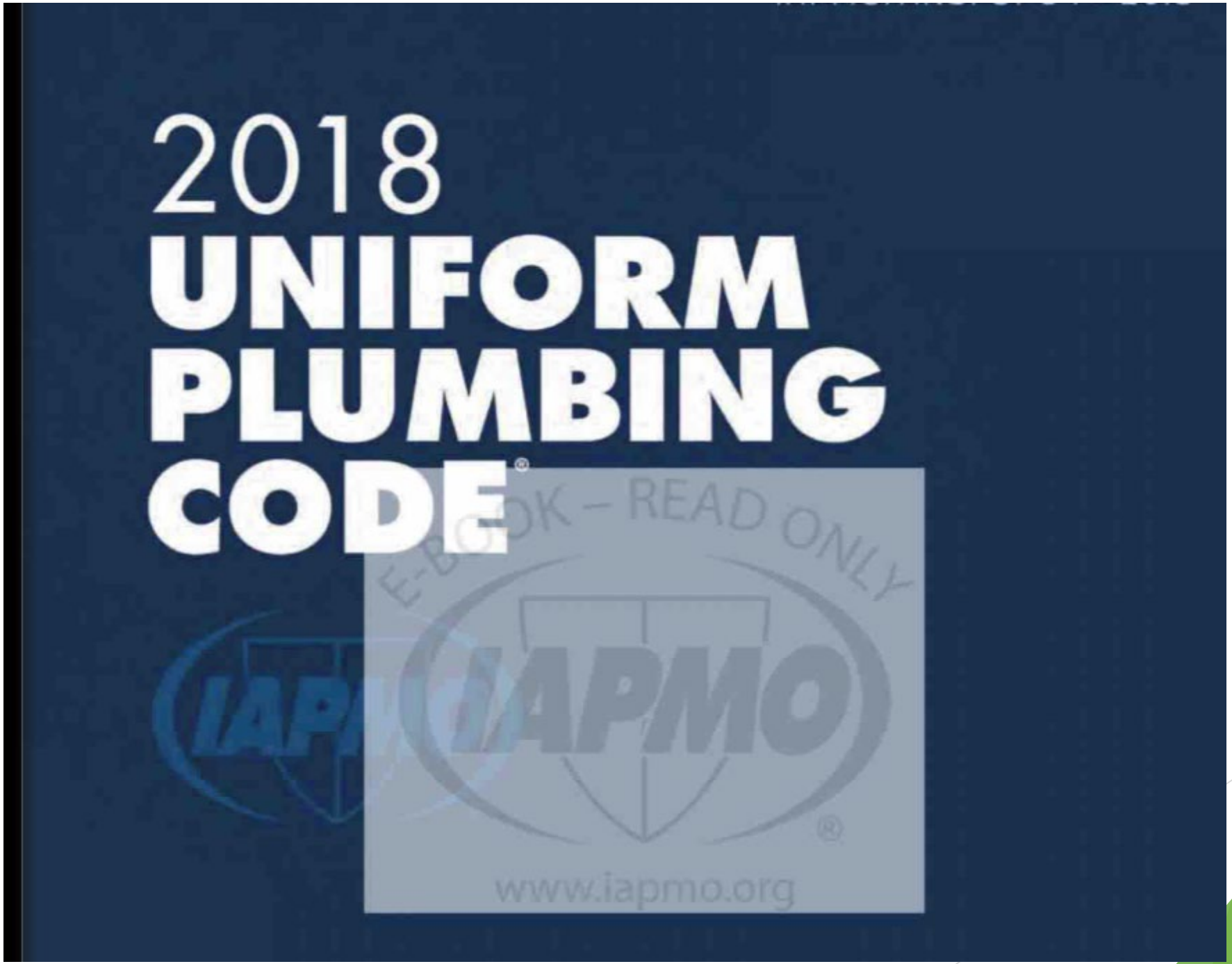

2018
UNIFORM
PLUMBING
CODE®
E-BOOK - READ ONLY
IAPMO
www.iapmo.org

TABLE 610.3
WATER SUPPLY FIXTURE UNITS (WSFU) AND MINIMUM FIXTURE BRANCH PIPE SIZES[3]

APPLIANCES, APPURTENANCES OR FIXTURES[2]	MINIMUM FIXTURE BRANCH PIPE SIZE[1,4] (inches)	PRIVATE	PUBLIC	ASSEMBLY[6]
Bathtub or Combination Bath/Shower (fill)	½	4.0	4.0	—
¾ inch Bathtub Fill Valve	¾	10.0	10.0	—
Bidet	½	1.0	—	—
Clothes Washer	½	4.0	4.0	—
Dental Unit, cuspidor	½	—	1.0	—
Dishwasher, domestic	½	1.5	1.5	—
Drinking Fountain or Water Cooler	½	0.5	0.5	0.75
Hose Bibb	½	2.5	2.5	—
Hose Bibb, each additional[8]	½	1.0	1.0	—
Lavatory	½	1.0	1.0	1.0
Lawn Sprinkler, each head[5]		1.0	1.0	—
Mobile Home, each (minimum)	—	12.0	—	—
Sinks	—	—	—	—
Bar	½	1.0	2.0	—
Clinical Faucet	½	—	3.0	—
Clinical Flushometer Valve with or without faucet	1	—	8.0	—
Kitchen, domestic with or without dishwasher	½	1.5	1.5	—
Laundry	½	1.5	1.5	—
Service or Mop Basin	½	1.5	3.0	—
Washup, each set of faucets	½	—	2.0	—
Shower, per head	½	2.0	2.0	—
Urinal, 1.0 GPF Flushometer Valve	¾	See Footnote[7]		—
Urinal, greater than 1.0 GPF Flushometer Valve	¾	See Footnote[7]		—
Urinal, flush tank	½	2.0	2.0	3.0
Urinal, Hybrid	½	1.0	1.0	1.0
Wash Fountain, circular spray	¾	—	4.0	—
Water Closet, 1.6 GPF Gravity Tank	½	2.5	2.5	3.5
Water Closet, 1.6 GPF Flushometer Tank	½	2.5	2.5	3.5
Water Closet, 1.6 GPF Flushometer Valve	1	See Footnote[7]		—
Water Closet, greater than 1.6 GPF Gravity Tank	½	3.0	5.5	7.0
Water Closet, greater than 1.6 GPF Flushometer Valve	1	See Footnote[7]		—

For SI units: 1 inch = 25 mm

Notes:

1. Size of the cold branch pipe, or both the hot and cold branch pipes.
2. Appliances, appurtenances, or fixtures not referenced in this table shall be permitted to be sized by reference to fixtures having a similar flow rate and frequency of use.
3. The listed fixture unit values represent their load on the cold water building supply. The separate cold water and hot water fixture unit value for fixtures having both hot and cold water connections shall be permitted to be each taken as three-quarter of the listed total value of the fixture.
4. The listed minimum supply branch pipe sizes for individual fixtures are the nominal (I.D.) pipe size.
5. For fixtures or supply connections likely to impose continuous flow demands, determine the required flow in gallons per minute (gpm) (L/s), and add it separately to the demand in gpm (L/s) for the distribution system or portions thereof.
6. Assembly [Public Use (See Table 422.1)].
7. Where sizing flushometer systems, see Section 610.10.
8. Reduced fixture unit loading for additional hose bibbs is to be used where sizing total building demand and for pipe sizing where more than one hose bibb is supplied by a segment of water distribution pipe. The fixture branch to each hose bibb shall be sized on the basis of 2.5 fixture units.

2018 Uniform Plumbing Code page 112

MCE

Duplex			
Appliance, Appurtenances, or Fixture	Number of Fixture Units per fixture	Quantity	Total Fixture Units
Bathtub or combination Bath/Shower	4	4	16
Clothes Washer	2	2	4
Kitchen Sink- domestic	1.5	2	3
Dishwasher	1.5	2	3
Laundry Sink	1.5	2	3
Lavatory wash basin	1	4	4
Water Closet 1.6 gpf gavity tank	2.5	4	10
Lawn Sprinkler	1	5	5
Hose Bib	2.5	2	5
		Total	53

Triplex			
Appliance, Appurtenances, or Fixture	Number of Fixture Units per fixture	Quantity	Total Fixture Units
Bathtub or combination Bath/Shower	4	6	24
Clothes Washer	2	3	6
Kitchen Sink- domestic	1.5	3	4.5
Dishwasher	1.5	3	4.5
Laundry Sink	1.5	3	4.5
Lavatory wash basin	1	6	6
Water Closet 1.6 gpf gavity tank	2.5	6	15
Lawn Sprinkler	1	5	5
Hose Bib	2.5	2	5
		Total	74.5

DRAFT City Design Standards		
Meter Size	Maximum Fixture Units	Gallons per minute
5/8-in	25	20
3/4-in	55	30
1- in	130	50
1.5-in	400	100
2-in	500	160