



Pagosa Area Water and Sanitation District
 100 Lyn Ave. / P.O. Drawer 4610, Pagosa Springs, CO 81157
 PHONE: (970) 731-2691 FAX: (970) 731-2693

Location Number: _____
 Account Number: _____
 Permit Number: _____

2017 COMMERCIAL WATER METER SIZING WORKSHEET

Date: _____
 Name of Property Owner: _____
 Name of Contact Person: _____
 Name of Business (if applicable): _____

Work: _____
 Cell: _____

Property Location
 Street Address: _____
 Subdivision: _____ Block: _____ Lot: _____

Type of Fixture	Current Water Fixtures In Bldg	+	Water Fixtures Added to Bldg	-	Water Fixtures Removed from Bldg.	=	Total Fixtures	x	Fixture Unit Multiplier (choose ONE per row)		=	Total Fixture Unit Value
									General Use	Heavy Use Assembly		
Bar Sink		+		-		=		x	3.0		=	
Bathroom sink, each set of faucets		+		-		=		x	2.0		=	
Clinic sink		+		-		=		x	8.0		=	
Clothes Washer, domestic (8 lb)		+		-		=		x	3.0		=	
Clothes Washer, domestic (15 lb)		+		-		=		x	4.0		=	
Dental unit, cuspidor		+		-		=		x	1.0		=	
Dishwasher, domestic		+		-		=		x	1.5		=	
Drinking fountain or water cooler		+		-		=		x	0.5	0.8	=	
Hose bibb - FIRST		+		-		=		x	2.5		=	
Hose bibb, EACH ADDITIONAL		+		-		=		x	1.0		=	
Kitchen sink, hotel or restaurant		+		-		=		x	4.0		=	
Kitchen sink, domestic		+		-		=		x	1.5		=	
Laundry sink		+		-		=		x	2.0		=	
Lawn sprinkler, each full head		+		-		=		x	1.0		=	
Service sink or mop basin		+		-		=		x	3.0		=	
Shower		+		-		=		x	2.0		=	
Shower, continuous use		+		-		=		x	5.0		=	
Toilet, 1.6 GPF gravity tank		+		-		=		x	2.5	4.0	=	
Toilet, 3.5 GPF gravity tank		+		-		=		x	5.0	7.0	=	
Urinal, 1.0 GPF		+		-		=		x	3.0	5.0	=	
Urinal, greater than 1.0 GPF		+		-		=		x	5.0	6.0	=	
Urinal, flush tank		+		-		=		x	3.0	4.0	=	
Washfountain, circular spray		+		-		=		x	4.0		=	
Other (Describe)		+		-		=		x			=	
Other (Describe)		+		-		=		x			=	

For explanations, see 1997 Uniform Plumbing Code & 2006 International Plumbing Code **Fixture Unit Subtotal :** _____

Other Water Requirements: See Table E103.3(3)

Fixture Description: _____	GPM: _____	Number: _____	Calculated Fixture Units: _____
Fixture Description: _____	GPM: _____	Number: _____	Calculated Fixture Units: _____
Fixture Description: _____	GPM: _____	Number: _____	Calculated Fixture Units: _____

Total Fixture Units: _____

I affirm that the information given is correct. I acknowledge that the approval given for minimum meter size and maximum water capacity is based solely on the information provided above, and such determination is at the discretion of the Pagosa Area Water and Sanitation District. Any deviation under construction will require resubmission of corrected data for determination of adequacy of meter size.

Required Signatures:

Signature (Design Engineer) _____ Date Signed _____

Signature (Owner/Agent) _____ Date Signed _____

Location Number: _____

Account Number: _____

Permit Number: _____

Instructions for completion of the PAWSD Commercial or Multi-Family Water Meter Sizing Worksheet

Matrix to Determine Meter Size and Water Demand

Complete the columns of the matrix by supplying the quantity and type of fixtures being added, remaining, and/or removed. (Note: Relocated fixtures are considered "remaining" since there is no change in demand.) Accuracy of the fixture count is necessary to determine the appropriate meter size and Equivalent Units.

Fixtures in New Structure

In the "Fixtures in New Structure" column, list the number of new fixtures or the number of fixtures being added to an existing project under the appropriate fixture type.

Fixtures in Existing Structure

In the "Fixtures in Existing Structure" column, list the number of fixtures that will remain or that will be relocated during the construction phase of the project.

Fixtures Removed

In the "Fixtures Removed" column, list the number of fixtures that are actually being removed which will create a reduction in the water demand. Note: Replacing a sink with a new sink or a hose bibb with a new hose bibb, etc, does not constitute "Removed." They are considered as "Fixtures in Existing Structure" (unless replacement is by fixtures of lower-flow capacity).

Other Water Requirements

There are some process water demands that are not listed, such as car washes. Each of these will be assigned a fixture unit count based upon its GPM demand. Make sure this information is provided.

Fixture Unit Multiplier

Each plumbing fixture is given a fixture unit value based upon the 1997 Uniform Plumbing Code. Fixture units are used for water meter sizing purposes. The unit count for each fixture is determined by multiplying the number of each fixture type by the appropriate number in the multiplier column. Only ONE multiplier should be chosen per row.

GENERAL USE: Applies to business, commercial, industrial, and assembly occupancies other than those defined under "Heavy Use." Included are the public and common areas in hotels, restaurants, and multi-dwelling buildings.

HEAVY USE: Applies to toilet facilities in occupancies that place a heavy, but intermittent, time-based demand on water supply system, such as schools, auditoriums, stadiums, race courses, theaters, and similar occupancies where queuing is likely to occur during periods of peak use.

Lawn Sprinkler Heads

Add all 1/4, 1/2, 3/4, and full irrigation heads to determine the total number of full sprinkler heads. For example, two 1/4 heads and one 1/2 head will equal one full head.

GPM (Gallons per Minute)

When any water requirement is listed by GPM demand, fixture unit count will be determined by using the 2006 Uniform Plumbing Code Table E103.3(3) - Table For Estimating Demand.

2017 COMMERCIAL & MULTI-FAMILY ACCOUNTS -TO BE COMPLETED BY PAWSD STAFF

Required Service Size and Equivalent Units Chart

Fixture Unit Count	Meter Size	* # Equivalent Units	** GPM
0-30	1"	1	50
30.5-52	1"	1.5	50
52.5-127	1"	2.5	50
128-375	1.5"	5	100
376-700	2"	8	180
701-1950	3"	16	320
1951-3700	4"	25	500
3,701-8,200	6"	50	1,000

*EU designation set forth by '97 Uniform & '06 International Plumbing Code.

**With approximate flow of 60 psi at meter

***** Monthly Basic Service Assessment**

Meter Size	EU	*** Water	Water/Wastewater
1"	1	\$23.50	\$55.50
1"	1.5	\$35.25	\$83.25
1"	2.5	\$58.75	\$138.75
1.5"	5	\$117.50	\$277.50
2"	8	\$188.00	\$444.00
3"	16	\$376.00	\$888.00
4"	25	\$587.50	\$1,387.50
6"	50	\$1,175.00	\$2,775.00

*** Includes 2,000 gal/EU

Fixture Count Total (from pg.1): _____

Corresponding Meter Size: _____

Acct Current Meter Size: _____

Corresponding EU: _____

Acct Current EU: _____

Water CIF: \$2,658 / EU _____

Wastewater CIF: \$1,017 / EU _____

Raw Water Acquisition Fee: \$1,959 / EU _____

NOTES / COMMENTS:

Prepared By: _____

Date: _____

PLEASE NOTE: FEE SCHEDULES ARE SUBJECT TO CHANGE

Location Number: _____

Account Number: _____

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Appendix E

Table E103.3(3)
Table for Estimating Demand
Supply Systems Predominantly for Flush Tanks

Gal per Minute	Water Supply Fixture Units	Cubic ft per Minutes
3.0	1	0.041040
5.0	2	0.06840
6.5	3	0.86892
8.0	4	1.06944
9.4	5	1.26592
10.7	6	1.4303760
11.8	7	1.577424
12.8	8	1.711104
13.7	9	1.831416
14.6	10	1.951728
15.4	11	2.058672
16.0	12	2.138880
16.5	13	2.205720
17.0	14	2.272560
17.5	15	2.339400
18.0	16	2.906240
18.4	17	2.459712
18.8	18	2.513184
19.2	19	2.566656
19.6	20	2.620128
21.5	25	2.874120
23.3	30	3.114744
24.9	35	3.328632
26.3	40	3.515784
27.7	45	3.702936
29.1	50	3.890088

Gal per Minute	Water Supply Fixture Units	Cubic ft per Minutes
32.0	60	4.277760
35.0	70	4.678800
38.0	80	5.079840
41.0	90	5.480880
43.5	100	5.815080
48.0	120	6.416640
52.5	140	7.018200
57.0	160	7.619760
61.0	180	8.154480
65.0	200	8.689200
70.0	225	9.357600
75.0	250	10.026000
80.0	275	10.694400
85.0	300	11.362800
105.0	400	14.036400
124.0	500	16.576320
170.0	750	22.725600
208.0	1,000	27.805440
239.0	1,250	31.949520
269.0	1,500	35.959920
297.0	1,750	39.702960
325.0	2,000	43.446000
380.0	2,500	50.798400
433.0	3,000	57.883440
525.0	4,000	70.182000
593.0	5,000	79.272240