

PAGOSA AREA WATER AND SANITATION DISTRICT

**RESOLUTION ADOPTING POLICY TO DETERMINE EQUIVALENT UNITS FOR
NEW OR CHANGE OF USE COMMERCIAL AND RESIDENTIAL CONNECTIONS
TO THE DISTRICT'S MUNICIPAL WATER SYSTEM**

WHEREAS, the Pagosa Area Water and Sanitation District ("District") is a quasi-municipal corporation and political subdivision of the State of Colorado organized pursuant to Title 32 of the Colorado Revised Statutes, and charged with the responsibility of providing water service to its constituents; and

WHEREAS, Section 32-1-1001(1)(h), C.R.S., authorizes the District's Board of Directors (the "Board") to have the management, control and supervision of all the business and affairs of the special district and all construction, installation, operation and maintenance of special district improvements; and

WHEREAS, Section 32-1-1001(1)(m), C.R.S., authorizes the Board to adopt, amend and enforce bylaws, rules and regulations for carrying out the business, objects and affairs of the Board and District; and

WHEREAS, on November 13, 2001 and three times thereafter, on July 8, 2003, February 8, 2005 and May 9, 2006, the Board did implement and continues to implement Capital Investment Fee ("CIF") policies to raise funds for general improvements to the efficiency, capacity, reliability and safety of its water treatment and distribution systems as necessary to serve existing and planned water demand; and

WHEREAS, on December 12, 2006, the Board implemented policies to address the methodology and basis for assessing water treatment and water distribution costs necessitated by growth in water demand created by increased residential and commercial density inside its service area; and

WHEREAS, the Board, after receiving extensive public comment, determined at its June 10, 2008 regular Board meeting the need to implement a policy to address the methodology for calculating Equivalent Units (E.U.s) for new or change of use commercial connections to its water treatment and distribution systems as necessary to equitably allocate rates and fees, including the components of the District's CIF, by water demand requirements of such new or change of use connections; and

WHEREAS, the Board, after receiving extensive public comment, determined at its July 15, 2008 regular Board meeting the need to implement a policy to address the methodology for calculating Equivalent Units (E.U.s) for new or change of use residential connections to its water treatment and distribution systems as necessary to equitably allocate rates and fees, including the components of the District's CIF, by water demand requirements of such new or change of use connections; and

WHEREAS, the Board has determined that using the 1997 Uniform Plumbing Code and fixture units to specify gallons per minute meter capacity requirements is an industry standard procedure; and

WHEREAS, the American Water Works Association recognizes the hydraulic capacity ratio of increasing meter sizes as compared to the basic 5/8" meter size, as shown in Exhibit A, attached hereto and incorporated herein; and

WHEREAS, the Board has determined that E.U.s can be equitably calculated by reflecting the hydraulic capacity ratio shown in Exhibit A, with a 5/8" meter size being equivalent to 1 E.U; and

WHEREAS, the Board has determined that it is in the best interest of the District and its customers to take measures to ensure that water meters are appropriately sized to most accurately measure water usage, reduce non-revenue real and apparent water loss and encourage water conservation; and

NOW THEREFORE, be it resolved by the Board of Directors of the Pagosa Area Water and Sanitation District, that its water E.U. calculation methodology and fee payment option is amended, clarified and shall be implemented, as follows:

1. Methodology:

Step 1.

A. A licensed engineer shall determine the number of fixture units and fixture water capacity requirements using the PAWSD "Commercial Water Meter Sizing Worksheet", attached hereto as Exhibit A, returning this worksheet with the signatures of the engineer and Owner/Agent thereon to PAWSD.

OR

B. The owner/agent shall determine the number of fixture units and fixture water capacity requirements using the PAWSD "Residential Water Meter Sizing Worksheet", attached hereto as Exhibit B, returning this worksheet with the signatures of the Owner/Agent thereon to PAWSD.

Step 2. PAWSD shall determine the required meter size by the affirmed fixture unit count, as described in the 1997 Uniform Plumbing Code or later revisions to such Code that have been duly adopted by PAWSD. In the case of a multiple-phase project, the allocated meter size shall be sufficient for the first phase of construction, with meter connections and meter pit in place to accommodate future meter size upgrades as required by subsequent phases.

Step 3. Based upon the hydraulic capacity ratio of the meter size as compared to the 5/8" meter size, with a 5/8" meter size being equal to 1 E.U., E.U.s are assigned and the monthly basic rates and CIF fees calculated accordingly.

- a. In the case of multiple-phase projects, E.U.s, rates and fees are calculated according to the meter size installed, with a re-calculation made whenever the meter size is changed to accommodate later phases.
- b. In the case that the new connection or larger meter is the result of a change in water use by an existing residential or commercial customer account, the new connection will receive credit for the existing E.U. allocation and will pay the CIF fees on the net difference, if any.
- c. Until December 31, 2008, in the case of a residential use that is under 2,000 square feet, the CIF will be calculated using the current \$1.30 per square foot (for water only connections) or \$2.90 per square foot (for water & waste water connections), with a minimum assessment based on 1000 square feet per the CIF resolutions dated November 13, 2001 and July 8, 2003. PAWSD will assess the lesser of the amounts determined by the square footage calculation method or flat E.U. calculation method.

2. Board Discretion

The Board shall have the sole discretion concerning the applicability of appropriate meter size and the subsequent and resulting E.U. allocation. The Board reserves the ability to replace a meter that, at any time, is larger than appropriate with an appropriately sized, smaller meter at no cost to the customer. Conversely, the Board reserves the ability to replace a meter that, at any time, is smaller than appropriate, based on the historical rate (in gallons per minute) of water demand, with an appropriately sized, larger meter. In this latter case, the customer will be charged for the increase in cost of the larger meter as well as for the resulting increase in E.U.s and related charges, including but not limited to, the WRF component of the CIF.

3. Payment Options:

Option 1. Payment of the CIF, including the WRF component thereof, shall be due and payable at the time that application for a connection permit is made to the District, or when the District is notified or learns of an expanded use through an existing connection.

Option 2. Until December 31, 2008, customers may elect to amortize WRF component of the CIF only and pay such WRF to the District over a five year period beginning at such time (1) the application for a connection permit is made to the District, or (2) when the District is notified or learns of an expanded use through an existing connection, by executing the standard form Fee Deferral Agreement approved and authorized by the District. The District shall charge customers an interest rate of five percent (5%) per annum on all such amortized fees. This policy of allowing payment of the WRF component of the CIF by Fee Deferral Agreement shall be available to customers only until December 31, 2008 unless the Board, in its sole discretion, determines to extend the period of time for entering into Fee Deferral Agreements.

4. Applicability of District Fees. The intent of this Resolution is to keep all aspects of the District's existing fee policy intact, and to merely apply a change in methodology for calculating E.U.s for residential customers. Payment of the CIF shall in no way relieve the

customer from paying all other applicable District fees then in effect as provided in the District's Rules and Regulations.


5. Rules and Regulations. The appropriate corresponding sections of the District's Rules and Regulations are hereby amended to conform to the procedures and policies adopted herein, and staff is directed to make appropriate changes to the District's Rules and Regulations to so conform.

6. Severability. If any section, subsection, paragraph, clause or provision of this resolution shall for any reason be held to be invalid or unenforceable, the invalidity or unenforceability of such section, subsection, paragraph, clause or provision shall in no manner affect any remaining provisions of this resolution, the intent being that the same are severable.

7. Repealer. All orders, resolutions, bylaws or regulations of the District, or parts thereof, inconsistent with this resolution are hereby repealed to the extent only of such inconsistency.

8. Effective Date. This Resolution shall be enforced as effective on, and as of, June 10, 2008 for commercial customers and July 15, 2008 for residential customers, the dates upon which the Board adopted its policy of calculating E.U.s on the basis of meter size as described herein.

ADOPTED this 12th day of August, 2008, by a vote of 4 in favor and 0 opposed.


Karen A. Wessels, President

(SEAL)

Attest:


Windsor D. Chacey, Secretary

EXHIBIT A



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

COMMERCIAL WATER METER SIZING WORKSHEET

Date: _____
 Name of Property Owner: _____ Contact Person Phone Number: _____
 Name of Contact Person: _____ Work: _____
 Name of Business (if applicable): _____ Cell: _____

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

Type of Fixture	Fixtures in New Structure	+	Fixtures in Existing Structure	-	Fixtures Removed	=	Total Fixtures	x	Fixture Unit Multiplier (choose ONE per row)		=	Total Fixture Unit Value
									General Use	Heavy Use Assembly		
Bar Sink		+		-		=		x	2.0		=	
Bathroom sink, each set of faucets		+		-		=		x	1.0		=	
Clinic sink		+		-		=		x	8.0		=	
Clothes Washer, domestic		+		-		=		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		+		-		=		x	2.5		=	
Hose bibb, each additional		+		-		=		x	1.0		=	
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	5.5	7.0	=	
Urinal, 1.0 GPF		+		-		=		x	4.0	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

Fixture Unit Subtotal: _____

Other Water Requirements:

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 _____

Pagosa Area Water and Sanitation District

Instructions for the completion of 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

FOR OFFICE USE ONLY - TO BE COMPLETED BY PAUSD STAFF

WATER USER FEES - COMMERCIAL USERS (effective June 10, 2008)

Required Service Size and Equivalent Units Chart			
Fixture Unit Count	Meter Size	# Equivalent Units*	GPM**
0-30	5/8"	1	20
30.5-52	3/4"	1.5	30
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 represents hydraulic capacity ratio of meter size, as set forth by AWWA Manual M-6

**With approximate flow of 60 psi at meter

Monthly Basic Service Assessment***			
Meter Size	EU	Water	Water/Wastewater
5/8"	1	\$12	\$35
3/4"	1.5	\$18	\$52.50
1"	2.5	\$30	\$87.50
1.5"	5	\$60	\$175
2"	8	\$96	\$560
3"	16	\$192	\$560
4"	25	\$300	\$875
6"	50	\$600	\$1,750

*** does not include usage rates

FIXTURE COUNT TOTAL (from pg.1): _____

CORRESPONDING METER SIZE: _____

EU FOR BILLING: _____

EU CREDIT (if applicable): < _____ >

EU FOR FEE ASSESSMENT: _____

BASIC SERVICE FEE: \$ _____

CIF/WRF FEE: \$ _____

NOTES / COMMENTS:

Prepared By: _____ Date: _____

PLEASE NOTE: FEE SCHEDULES ARE SUBJECT TO CHANGE

EXHIBIT B



Pagosa Area Water and Sanitation District
 100 Lyn Ave. / P.O. Drawer 4610, Pagosa Springs, CO 81147
 PHONE: (970) 731-2691 FAX: (970) 731-2693

RESIDENTIAL WATER METER SIZING WORKSHEET

Date: _____
 Name of Property Owner: _____
 Name of Contact Person: _____
 Name of Business (if applicable): _____
 Contact Person Phone Number: _____
 Work: _____
 Cell: _____

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

Type of Fixture	Fixtures in New Structure	+	Fixtures in Existing Structure	-	Fixtures Removed	=	Total Fixtures	x	Fixture Unit Multiplier (choose ONE per row)		=	Total Fixture Unit Value
									Individual dwelling	3 or more dwellings		
Bar Sink		+		-		=		x	1.0	1.0	=	
Bathub or combination bath/shower		+		-		=		x	4.0	3.5	=	
Bathroom sink, each set of faucets		+		-		=		x	1.0	0.5	=	
Bidet		+		-		=		x	1.0	0.5	=	
Clothes Washer, domestic		+		-		=		x	4.0	2.5	=	
Dishwasher, domestic		+		-		=		x	1.5	1.0	=	
Hose bibb		+		-		=		x	2.5	2.5	=	
Hose bibb, each additional		+		-		=		x	1.0	1.0	=	
Kitchen sink, domestic		+		-		=		x	1.5	1.0	=	
Laundry sink		+		-		=		x	2.0	1.0	=	
Lawn sprinkler, each full head		+		-		=		x	1.0	1.0	=	
Shower		+		-		=		x	2.0	2.0	=	
Toilet, 1.6 GPF gravity tank		+		-		=		x	2.5	2.5	=	
Toilet, 3.5 GPF gravity tank		+		-		=		x	3.0	3.0	=	
Whirlpool bath / combination bath/shr		+		-		=		x	4.0	4.0	=	
Other (Describe)												
Other (Describe)		+		-		=		x			=	
For explanations, see 1997 Uniform Plumbing Code											Fixture Unit Subtotal:	

Other Water Requirements:

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.

Signature (Owner / Agent) _____ Date Signed _____

Pagosa Area Water and Sanitation District

Instructions for the completion of 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.

INDIVIDUAL DWELLING: Applies to single family residence or master metered duplex. In the case of a duplex, add ALL fixtures from both units. For example, if each duplex unit has one bathtub, the total number of bathtub fixtures is two.
3 OR MORE DWELLINGS: Applies to a master metered multi-residential unit building, where the number of individual units is three or more. When counting fixtures, total the number of like fixtures for ALL units. For example, in a four unit apartment building, if each unit has one kitchen sink, the total number of kitchen sink fixtures would be four.

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

FOR OFFICE USE ONLY - TO BE COMPLETED BY PAUSD STAFF

WATER USER FEES - RESIDENTIAL USERS (effective July 15, 2008)

Required Service Size and Equivalent Units Chart			
Fixture Unit Count	Meter Size	# Equivalent Units*	GPM**
0-30	5/8"	1	20
30.5-52	3/4"	1.5	30
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

FIXTURE COUNT TOTAL (from pg.1): _____

CORRESPONDING METER SIZE: _____

EU FOR BILLING: _____

EU CREDIT (if applicable): < _____ >

EU FOR FEE ASSESSMENT: _____

BASIC SERVICE FEE: \$ _____

CIF/WRF FEE[‡]: \$ _____

[‡]for homes under 2000 ft² requiring 5/8 meter, lower CIF assessment may apply

*EU designation represents hydraulic capacity ratio of meter size, as set forth by AWWA Manual M-6

**With approximate flow of 60 psi at meter

Monthly Basic Service Assessment***			
Meter Size	EU	Water	Water/Wastewater
5/8"	1	\$12	\$35
3/4"	1.5	\$18	\$52.50
1"	2.5	\$30	\$87.50
1.5"	5	\$60	\$175
2"	8	\$96	\$560
3"	16	\$192	\$560
4"	25	\$300	\$875
6"	50	\$600	\$1,750

*** does not include usage rates

NOTES / COMMENTS:

Prepared By: _____

Date: _____

PLEASE NOTE: FEE SCHEDULES ARE SUBJECT TO CHANGE