



City of Santa Barbara
Public Works Department

APPLICATION FOR REDUCTION IN WATER METER SIZE

This application is used to request a reduction in the size of a City water meter. A reduction in size is subject to approval by the Public Works Department (and Fire Department if served by an NFPA 13D fire sprinkler system) and requires payment of the applicable fees. There shall be no refund of larger meter size Capacity Fees upon reduction in meter size. It is the responsibility of the property owner requesting the reduction to verify that the requested meter size will provide sufficient flow and pressure to comply with California Plumbing Code and National Fire Protection Association requirements and meet the needs of the occupants of the property. A request to change back to a larger size will require payment of additional fees. City reserves the right to change the meter size if it is later determined that the meter flow rate is operating outside the manufacturer's recommended range.

The following maximum operating flow rates for City meter are provided for information only. Customers are encouraged to seek the advice of a trained professional (e.g. Plumber, Mechanical Engineer, Fire Protection Contractor/Engineer, or Civil Engineer) to be sure that any reduction in meter size is appropriate for their particular property.

Meter Size	Maximum Flow Rate (gpm) for Sensus Meters	Maximum Flow Rate (gpm) for Badger Meters	Manufacturer (Badger) Recommended Maximum Continuous Flow Rate (gpm)
5/8"	20	20	10
3/4"	30	35	25
1"	50	55	25
1 1/2"	100	120	80
2"	160	170	100

(Contact Water Resources Division for larger sizes)

GENERAL INFORMATION

Property Owner Name: _____

Service Address: _____

Assessor Parcel Number: _____

Property Owner Phone Number: _____

Water Account Number: _____

Applicant Name: _____

Applicant Address: _____

Applicant Phone Number: _____

Applicant Email Address: _____

WATER METER INFORMATION

Current Meter Size: _____ inch

Requested Meter Size: 5/8 inch 3/4 inch 1 inch 1 1/2 inch 2 inch

Current Meter Number: _____ (Please read this directly from your meter, not from your water bill)

WATER USE INFORMATION

Water Account Classification: Single Family Residential Multifamily Residential

Commercial/Industrial Other Purposes (describe): _____

Total number of dwelling units on property: _____

Number of dwelling units served by subject water meter: _____

This property is located outside the City of Santa Barbara limits (property is in the County of Santa Barbara jurisdiction). Properties located in the County of Santa Barbara must have a minimum meter size of 3/4 inch.

Is the irrigation system on your property served by a dedicated irrigation meter? Yes or No

Are you proposing to install a dedicated irrigation meter for your irrigation system? Yes or No If yes, a separate application for a Potable Water Meter Service is required.

The irrigation system on my property consists of (check all that apply):

Drip Sprinklers Microsprays There is no irrigation system on my property

This property has onsite fire protection flow requirements served through the domestic meter of _____ gallons per minute.

This property does not have any onsite fire protection requirements served through the domestic meter.

SUBMITTAL REQUIREMENTS

The following must be submitted with this application:

- Completed Fixture Unit Determination Chart (attached)
- For a reduction in meter size to 5/8" (or other situations deemed necessary by the City or applicant) calculations must be provided/stamped by a licensed plumber, Mechanical, or Civil Engineer in compliance with Appendix A Recommended Rules for Sizing the Water Supply System of the 2016 California Plumbing Code. The calculations may assume the following and **may be a deferred submittal**:

Obtain minimum daily service pressure in your area by visiting the Public Works Permit Counter or calling Water Resources staff at (805) 564-5413.

A friction loss relative to the rate of flow for the City water meter as shown in Chart A 102.2 Friction Losses for Disk-Type Water Meters of the California Plumbing Code.

- Please attach a copy of your most recent water bill.

This application along with the above items shall be returned to:

City of Santa Barbara – Public Works Department
Public Works Permit Counter
630 Garden Street Santa Barbara, CA 93101
or
P.O. Box 1990 Santa Barbara, CA 93102-1990
(805) 564-5388

You may submit this application online at <https://landuse.santabarbaraca.gov/>

If you have any questions regarding your water meter, please contact Meter Services, at (805) 564-5413.

I declare, under penalty of perjury, that I am the owner of the property identified above and that the information provided herein is accurate and true to the best of my knowledge. I understand that it is my responsibility to determine that the requested meter size complies with the code requirements and will provide adequate flow and pressure for the property. I also understand that additional fees will be required to change back to a larger size meter.

Property Owner Signature: _____

Print Name: _____

Date: _____

The above addresses Public Works Department concerns and requirements. Other City Divisions/Departments may have additional requirements.

For information call (805) 564-5388

City of Santa Barbara Public Works Department

630 Garden Street, Santa Barbara, CA 93101

7/27/2022

FIXTURE UNIT DETERMINATION CHART

Minimum meter size based on plumbing fixture units, size/length of service and pressure.

To determine the minimum meter size allowable under the California Plumbing Code, the total number of fixture units on the premises (and served by the subject meter) must first be determined. First, insert the number of each type of fixture on your premises under the column headed "Quantity". Second, multiply the quantity by the number of fixture units given under either column "Private Use" or "Public Use" or "Assembly", whichever is applicable. Third, post the result in the "Total Column". Finally total that column in the box down below.

APPLIANCES, APPURTENANCES OR FIXTURES ²	PRIVATE	PUBLIC	ASSEMBLY ⁶	Quantity	Total
Bathtub or Combination Bath/Shower (fill)	4.0	4.0	—	X	=
¾ inch Bathtub Fill Valve	10.0	10.0	—	X	=
Bidet	1.0	—	—	X	=
Clothes Washer	4.0	4.0	—	X	=
Dental Unit, cuspidor	—	1.0	—	X	=
Dishwasher, domestic	1.5	1.5	—	X	=
Drinking Fountain or Water Cooler	0.5	0.5	0.75	X	=
Hose Bibb	2.5	2.5	—	X	=
Hose Bibb, each additional ⁸	1.0	1.0	—	X	=
Lavatory	1.0	1.0	1.0	X	=
Lawn Sprinkler, each head ⁵	1.0	1.0	—	X	=
Mobilehome or Manufactured Home, each (minimum) ⁹	6.0	—	—	X	=
Sinks	—	—	—	X	=
Bar	1.0	2.0	—	X	=
Clinical Faucet	—	3.0	—	X	=
Clinical Flushometer Valve with or without faucet	—	8.0	—	X	=
Kitchen, domestic with or without dishwasher	1.5	1.5	—	X	=
Laundry	1.5	1.5	—	X	=
Service or Mop Basin	1.5	3.0	—	X	=
Washup, each set of faucets	—	2.0	—	X	=
Shower, per head	2.0	2.0	—	X	=
Urinal, 1.0 GPF Flushometer Valve	See Footnote ⁷		—	X	=
Urinal, greater than 1.0 GPF Flushometer Valve	See Footnote ⁷		—	X	=
Urinal, flush tank	2.0	2.0	3.0	X	=
Wash Fountain, circular spray	—	4.0	—	X	=
Water Closet, 1.6 GPF Gravity Tank	2.5	2.5	3.5	X	=
Water Closet, 1.6 GPF Flushometer Tank	2.5	2.5	3.5	X	=
Water Closet, 1.6 GPF Flushometer Valve	See Footnote ⁷		—	X	=
Water Closet, greater than 1.6 GPF Gravity Tank	3.0	5.5	7.0	X	=
Water Closet, greater than 1.6 GPF Flushometer Valve	See Footnote ⁷		—	X	=

TOTAL FIXTURE UNITS	
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⁵ Re Lawn Sprinklers, the quantity should be the maximum number of sprinkler heads in any given irrigation zone or zones that will be running at any given point in time. If using irrigation systems other than sprinkler heads, an equivalent fixture unit may be used based on the gallons per minute calculated for that system.

Then measure the approximate distance between the water meter and the most distant fixture.

Insert distance in _____ feet from water meter to furthest fixture.

Then Contact Water Resources at (805) 564-5413 to provide available static pressure after head loss _____ psi. Please note this information is provided based upon the City's Water system performance but is not a guarantee of future minimum performance. You may assume 60 psi for your calculations as appropriate.

Then reference California Plumbing Code Table 610.4 to find the Minimum Meter and Street Service size for the given Maximum Allowable Length, Pressure Range, and Fixture Units determined above.

Minimum Meter and Street Service Size: _____ inches

This worksheet is provided as a guide for minimum meter size. It is recommend that property owner consult with an appropriately licensed contractor or engineer to determine the appropriate meter size for the subject property.

California Plumbing Code Excerpts for Reference Only

WATER SUPPLY AND DISTRIBUTION

610.0 Size of Potable Water Piping.

610.1 Size. The size of each water meter and each potable water supply pipe from the meter or other source of supply to the fixture supply branches, risers, fixtures, connections, outlets, or other uses shall be based on the total demand and shall be determined according to the methods and procedures outlined in this section. Water piping systems shall be designed to ensure that the maximum velocities allowed by the code and the applicable standard are not exceeded.

610.3 Quantity of Water. The quantity of water required to be supplied to every plumbing fixture shall be represented by fixture units, as shown in Table 610.3. Equivalent fixture values shown in Table 610.3 include both hot and cold water demand.

610.4 Sizing Water Supply and Distribution Systems. Systems within the range of Table 610.4 shall be permitted to be sized from that table or by the method in accordance with Section 610.5.

610.5 Sizing per Appendices A and C. Except as provided in Section 610.4, the size of each water piping system shall be determined in accordance with the procedure set forth in

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Appendix A. For alternate methods of sizing water supply systems, see Appendix C.

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WATER SUPPLY AND DISTRIBUTION

610.7 Conditions for Using Table 610.4. On a proposed water piping installation sized using Table 610.4, the following conditions shall be determined:

- (1) Total number of fixture units as determined from Table 610.3, Equivalent Fixture Units, for the fixtures to be installed.
- (2) Developed length of supply pipe from meter to most remote outlet.
- (3) Difference in elevation between the meter or other source of supply and the highest fixture or outlet.
- (4) Pressure in the street main or other source of supply at the locality where the installation is to be made.
- (5) In localities where there is a fluctuation of pressure in the main throughout the day, the water piping system shall be designed on the basis of the minimum pressure available.

610.8 Size of Meter and Building Supply Pipe Using Table 610.4. The size of the meter and the building supply pipe shall be determined as follows:

- (1) Determine the available pressure at the water meter or other source of supply.
- (2) Add or subtract depending on positive or negative elevation change, $\frac{1}{2}$ psi (3.4 kPa) for each foot (305 mm) of difference in elevation between such source of supply and the highest water supply outlet in the building or on the premises.
- (3) Use the "pressure range" group within which this pressure will fall using Table 610.4.
- (4) Select the "length" column that is equal to or longer than the required length.
- (5) Follow down the column to a fixture unit value equal to or exceeding the total number of fixture units required by the installation.
- (6) Having located the proper fixture unit value for the required length, sizes of meter and building supply pipe as found in the two left-hand columns shall be applied.

No building supply pipe shall be less than $\frac{3}{4}$ of an inch (20 mm) in diameter.

612.5.3 Sprinkler Pipe Sizing. The sprinkler piping shall be sized for the flow rate in accordance with Section 612.5.1. The flow rate required to supply the

WATER SUPPLY AND DISTRIBUTION

plumbing fixtures shall not be required to be added to the sprinkler design flow for multipurpose or stand-alone piping systems. The sizing of the water supply to the plumbing fixtures shall be determined in accordance with this chapter. For multipurpose piping systems, the largest pipe size required based on either the sprinkler piping calculations or the water distribution piping calculations shall be installed.

612.5.3.1 Sprinkler Pipe Sizing Method. The sprinkler pipe shall be sized using the prescriptive method in Section 612.5.3.2 or by hydraulic calculation in accordance with NFPA 13D.

WATER SUPPLY AND DISTRIBUTION

**TABLE 610.3
WATER SUPPLY FIXTURE UNITS (WSFU) AND MINIMUM FIXTURE BRANCH PIPE SIZES³**

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	—
Mobilehome or Manufactured Home, each (minimum) ⁹	—	6.0	—	—
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
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.

⁹ For water supply fixture unit values related to lots within mobilehome parks in all parts of the State of California, see California Code of Regulations, Title 25, Division 1, Chapter 2, Article 5, Section 1278. For water supply fixture unit values related to lots within special occupancy parks in all parts of the State of California, see California Code of Regulations, Title 25, Division 1, Chapter 2.2, Article 5, Section 2278.

**TABLE 610.4
FIXTURE UNIT TABLE FOR DETERMINING WATER PIPE AND METER SIZES**

METER AND STREET SERVICE (inches)	BUILDING SUPPLY AND BRANCHES (inches)	MAXIMUM ALLOWABLE LENGTH (feet)													
		40	60	80	100	150	200	250	300	400	500	600	700	800	900
PRESSURE RANGE – 30 to 46 psi¹															
3/4	1/2 ²	6	5	4	3	2	1	1	0	0	0	0	0	0	0
3/4	3/4	16	16	14	12	9	6	5	4	4	3	2	2	2	1
3/4	1	29	25	23	21	17	15	13	12	10	8	6	6	6	6
1	1	36	31	27	25	20	17	15	13	12	10	8	6	6	6
3/4	1 1/4	36	33	31	28	24	23	21	19	17	16	13	12	12	11
1	1 1/4	54	47	42	38	32	28	25	23	19	17	14	12	12	11
1 1/2	1 1/4	78	68	57	48	38	32	28	25	21	18	15	12	12	11
1	1 1/2	85	84	79	65	56	48	43	38	32	28	26	22	21	20
1 1/2	1 1/2	150	124	105	91	70	57	49	45	36	31	26	23	21	20
2	1 1/2	151	129	129	110	80	64	53	46	38	32	27	23	21	20
1	2	85	85	85	85	85	85	82	80	66	61	57	52	49	46
1 1/2	2	220	205	190	176	155	138	127	120	104	85	70	61	57	54
2	2	370	327	292	265	217	185	164	147	124	96	70	61	57	54
2	2 1/2	445	418	390	370	330	300	280	265	240	220	198	175	158	143
PRESSURE RANGE – 46 to 60 psi¹															
3/4	1/2 ²	7	7	6	5	4	3	2	1	1	1	0	0	0	0
3/4	3/4	20	20	19	17	14	11	9	8	6	5	4	4	3	3
3/4	1	39	39	36	33	28	23	21	19	17	14	12	10	9	8
1	1	39	39	39	36	30	25	23	20	18	15	12	10	9	8
3/4	1 1/4	39	39	39	39	39	39	34	32	27	25	22	19	19	17
1	1 1/4	78	78	76	67	52	44	39	36	30	27	24	20	19	17
1 1/2	1 1/4	78	78	78	78	66	52	44	39	33	29	24	20	19	17
1	1 1/2	85	85	85	85	85	85	80	67	55	49	41	37	34	32
1 1/2	1 1/2	151	151	151	151	128	105	90	78	62	52	42	38	35	32
2	1 1/2	151	151	151	151	150	117	98	84	67	55	42	38	35	32
1	2	85	85	85	85	85	85	85	85	85	85	85	85	85	83
1 1/2	2	370	370	340	318	272	240	220	198	170	150	135	123	110	102
2	2	370	370	370	370	368	318	280	250	205	165	142	123	110	102
2	2 1/2	654	640	610	580	535	500	470	440	400	365	335	315	285	267
PRESSURE RANGE – Over 60 psi¹															
3/4	1/2 ²	7	7	7	6	5	4	3	3	2	1	1	1	1	0
3/4	3/4	20	20	20	20	17	13	11	10	8	7	6	6	5	4
3/4	1	39	39	39	39	35	30	27	24	21	17	14	13	12	11
1	1	39	39	39	39	38	32	29	26	22	18	14	13	12	11
3/4	1 1/4	39	39	39	39	39	39	39	39	34	28	26	25	23	22
1	1 1/4	78	78	78	78	74	62	53	47	39	31	26	25	23	22
1 1/2	1 1/4	78	78	78	78	78	74	65	54	43	34	26	25	23	22
1	1 1/2	85	85	85	85	85	85	85	85	81	64	51	48	46	43
1 1/2	1 1/2	151	151	151	151	151	151	130	113	88	73	51	51	46	43
2	1 1/2	151	151	151	151	151	151	142	122	98	82	64	51	46	43
1	2	85	85	85	85	85	85	85	85	85	85	85	85	85	85
1 1/2	2	370	370	370	370	360	335	305	282	244	212	187	172	153	141
2	2	370	370	370	370	370	370	370	340	288	245	204	172	153	141
2	2 1/2	654	654	654	654	654	650	610	570	510	460	430	404	380	356

For SI units: 1 inch = 25 mm, 1 foot = 304.8 mm, 1 pound-force per square inch = 6.8947 kPa

Notes:

- ¹ Available static pressure after head loss.
- ² Building supply, not less than 3/4 of an inch (20 mm) nominal size.