

CALGreen 2013: Compliance Forms and Worksheets

WORKSHEET (WS-1)
BASELINE WATER USE

BASELINE WATER USE CALCULATION TABLE									
Fixture Type	Flow Rate (gpm) ²		DURATION		DAILY USES		OCCUPANTS ^{3,4}		GALLONS PER DAY
Showerheads	2.0	X	5 min.	X	1	X	Note 2a	=	
Showerheads residential	2.5	X	8 min.	X	1	X		=	
Lavatory faucets residential	2.2	X	.25 min.	X	3	X		=	
Lavatory faucets nonresidential	0.5	X	.25 min.	X	3	X		=	
Kitchen faucets	2.2	X	4 min.	X	1	X	Note 2b	=	
Replacement aerators	2.2	X		X		X		=	
Wash fountains	2.2	X		X		X		=	
Metering faucets	0.25 gal/cycle	X	.25 min.	X	3	X		=	
Metering faucets for wash fountains	2.2	X	.25 min.	X		X		=	
Gravity tank type water closets	1.28 gal/flush	X	1 flush	X	1 male ³ 3 female	X		=	
Flushometer tank water closets	1.28 gal/flush	X	1 flush	X	1 male ³ 3 female	X		=	
Flushometer valve water closets	1.28 gal/flush	X	1 flush	X	1 male ³ 3 female	X		=	
Electromechanical hydraulic water closets	1.28 gal/flush	X	1 flush	X	1 male ³ 3 female	X		=	
Urinals	.5 gal/flush	X	1 flush	X	2 male	X		=	
Total daily baseline water use (BWU)									=
_____ (BWU) x .80=_____ Allowable water use									

1. For residential occupancies, the number of occupants shall be based on two persons for the first bedroom, plus one additional person for each additional bedroom.
2. For nonresidential occupancies, refer to Table A, Chapter 4, *2013 California Plumbing Code*, for occupant load factors.
 - a. Shower use by occupants depends on the type of use of the building or portion of a building, e.g., total occupant load for a health club, but only a fraction of the occupants in an office building as determined by the anticipated number of uses.
 - b. Nonresidential kitchen faucet use is determined by the occupant load of the area served by the fixture.
3. The daily use number shall be increased to three if urinals are not installed in the room.

WORKSHEET (WS-2)
20 PERCENT REDUCTION WATER USE

20 PERCENT REDUCTION WATER USE CALCULATION TABLE									
Fixture Type	Flow Rate ²		DURATION		DAILY USES		OCCUPANTS ^{2,3}		GALLONS PER DAY
Showerheads		X	5 min.	X	1	X	Note 3a	=	
Showerheads residential		X	8 min.	X	1	X		=	
Lavatory faucets residential		X	.25 min.	X	3	X		=	
Lavatory faucets nonresidential		X	.25 min.	X	3	X		=	
Kitchen faucets		X	4 min.	X	1	X	Note 3b	=	
Replacement aerators		X		X		X		=	
Wash fountains		X		X		X		=	
Metering faucets		X	.25 min.	X	3	X		=	
Metering faucets for wash fountains		X	.25 min.	X		X		=	
Gravity tank type water closets		X	1 flush	X	1 male ⁵ 3 female	X		=	
HET ⁴ High-efficiency toilet	1.28 gal/flush	X	1 flush	X	1 male ⁵ 3 female			=	
Flushometer tank water closets		X	1 flush	X	1 male ⁵ 3 female	X		=	
Flushometer valve water closets		X	1 flush	X	1 male ⁵ 3 female	X		=	
Electromechanical hydraulic water closets		X	1 flush	X	1 male ⁵ 3 female	X		=	
Urinals		X	1 flush	X	2 male	X		=	
Urinals Nonwater supplied	0.0 gal/flush	X	1 flush	X	2 male	X		=	
Proposed water use									=
_____ (BWU from WS-1) x .80=_____ Allowable water use									

- The flow rate values shall not exceed the baseline flow rates from the *California Code of Regulations* Title 20, 2010 Appliance Efficiency Regulations (See Table 4.303.2.)
- For residential occupancies, the number of occupants shall be based on two persons for the first bedroom, plus one additional person for each additional bedroom.
- For nonresidential occupancies, refer to Table A, Chapter 4, 2013 *California Plumbing Code*, for occupant load factors.
 - Shower use by occupants depends on the type of use of a building or portion of the building, e.g., total occupant load for a health club, but only a fraction of the occupants in an office building as determined by the anticipated number of users.
 - Nonresidential kitchen faucet use is determined by the occupant load of the area served by the fixture.
- Includes single and dual flush water closets with an effective flush of 1.28 gallons or less.
 - Single flush toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is the average flush volume when tested in accordance with ASME A 112.19.2.
 - Dual flush toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A 112.19.2 and ASME A112.19.14.
- The daily use number shall be increased to three if urinals are not installed in the room.
- Where complying faucets are unavailable, aerators rated at .35 gpm or other means may be used to achieve reduction.

WORKSHEET (WS-3) 30-35 OR 40 PERCENT REDUCTION WATER USE

30-35 OR 40 PERCENT REDUCTION WATER USE CALCULATION TABLE									
Fixture Type	Flow Rate ²		DURATION		DAILY USES		OCCUPANTS ^{2,3}		GALLONS PER DAY
Showerheads		X	5 min.	X	1	X	Note 3a	=	
Showerheads residential		X	8 min.	X	1	X		=	
Lavatory faucets residential		X	.25 min.	X	3	X		=	
Lavatory faucets nonresidential		X	.25 min.	X	3	X		=	
Kitchen faucets		X	4 min.	X	1	X	Note 3b	=	
Replacement aerators		X		X		X		=	
Wash fountains		X		X		X		=	
Metering faucets		X	.25 min.	X	3	X		=	
Metering faucets for wash fountains		X	.25 min.	X		X		=	
Gravity tank type water closets		X	1 flush	X	1 male ⁵ 3 female	X		=	
HET ⁴ High-efficiency toilet	1.12 gal/flush	X	1 flush	X	1 male ⁵ 3 female			=	
Flushometer tank water closets		X	1 flush	X	1 male ⁵ 3 female	X		=	
Flushometer valve water closets		X	1 flush	X	1 male ⁵ 3 female	X		=	
Electromechanical hydraulic water closets		X	1 flush	X	1 male ⁵ 3 female	X		=	
Urinals		X	1 flush	X	2 male	X		=	
Urinals Nonwater supplied	0.0 gal/flush	X	1 flush	X	2 male	X		=	
Proposed water use									=
30% Reduction _____ (BWU from WS-1) x .70=_____ Allowable water use 35% Reduction _____ (BWU from WS-1) x .65=_____ Allowable water use 40% Reduction _____ (BWU from WS-1) x .60=_____ Allowable water use									

1. The flow rate values shall not exceed the baseline flow rates from the California Code of Regulations Title 20, 2010 Appliance Efficiency Regulations (See Table 4.303.2.)
2. For residential occupancies, the number of occupants shall be based on two persons for the first bedroom, plus one additional person for each additional bedroom.
3. For nonresidential occupancies, refer to Table A, Chapter 4, 2013 California Plumbing Code, for occupant load factors.
 - a. Shower use by occupants depends on the type of use of a building or portion of the building, e.g., total occupant load for a health club, but only a fraction of the occupants in an office building as determined by the anticipated number of users.
 - b. Nonresidential kitchen faucet use is determined by the occupant load of the area served by the fixture.
4. Includes single and dual flush water closets with an effective flush of 1.28 gallons or less.
 Single flush toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is the average flush volume when tested in accordance with ASME A 112.19.2.
 Dual flush toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A 112.19.2 and ASME A112.19.14.
5. The daily use number shall be increased to three if urinals are not installed in the room.
6. Where complying faucets are unavailable, aerators rated at .35 gpm or other means may be used to achieve reduction.