

CHAPTER 8

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	2.5	×	5 min.	×	1	×		=	
Showerheads residential	2.5	×	8 min.	×	1	×		=	
Lavatory faucets residential	2.2	×	.25 min.	×	3	×		=	
Kitchen faucets	2.2	×	4 min.	×	1	×		=	
Replacement aerators	2.2	×		×		×		=	
Wash fountains	2.2	×		×		×		=	
Metering faucets	0.25	×	.25 min.	×	3	×		=	
Metering faucets for wash fountains	2.2	×	.25 min.	×		×		=	
Gravity tank type water closets	1.6	×	1 flush	×	1 male ¹ 3 female	×		=	
Flushometer tank water closets	1.6	×	1 flush	×	1 male ¹ 3 female	×		=	
Flushometer valve water closets	1.6	×	1 flush	×	1 male ¹ 3 female	×		=	
Electromechanical hydraulic water closets	1.6	×	1 flush	×	1 male ¹ 3 female	×		=	
Urinals	1.0	×	1 flush	×	2 male	×		=	
Total daily baseline water use (BWU)								=	
_____ (BWU) × .80 = _____ Allowable water use									

1. The daily use number shall be increased to three if urinals are not installed in the room.
2. The flow rate is from the CEC Appliance Efficiency Standards, Title 20 *California Code of Regulations*; where a conflict occurs, the CEC standards shall apply.
3. For low-rise residential occupancies, the number of occupants shall be based on two persons for the first bedroom, plus one additional person for each additional bedroom.
4. For nonresidential occupancies, refer to Table A, Chapter 4, 2010 *California Plumbing Code*, for occupant load factors.

**WORKSHEET (WS-2)
20 PERCENT REDUCTION WATER USE**

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

- The daily use number shall be increased to three if urinals are not installed in the room.
- The flow rate is from the CEC Appliance Efficiency Standards, Title 20 *California Code of Regulations*; where a conflict occurs, the CEC standards shall apply.
- For low-rise 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, 2010 *California Plumbing Code*, for occupant load factors.
- 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 112.19.233.2.
 - 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 A 112.19.14.

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 (gpm) ²		DURATION		DAILY USES		OCCUPANTS ^{3,4}		GALLONS PER DAY
Showerheads		×	5 min.	×	1	×		=	
Showerheads residential		×	8 min.	×	1	×		=	
Lavatory faucets residential		×	.25 min.	×	3	×		=	
Kitchen faucets		×	4 min.	×	1	×		=	
Replacement aerators		×		×		×		=	
Wash fountains		×		×		×		=	
Metering faucets		×	.25 min.	×	3	×		=	
Metering faucets for wash fountains		×	.25 min.	×		×		=	
Gravity tank type water closets		×	1 flush	×	1 male ¹ 3 female	×		=	
HET ⁵ High-efficiency toilet	1.12	×	1 flush	×	1 male ¹ 3 female	×		=	
Flushometer tank water closets		×	1 flush	×	1 male ¹ 3 female	×		=	
Flushometer valve water closets		×	1 flush	×	1 male ¹ 3 female	×		=	
Electromechanical hydraulic water closets		×	1 flush	×	1 male ¹ 3 female	×		=	
Urinals		×	1 flush	×	2 male	×		=	
Urinals Nonwater supplied	0.0	×	1 flush	×	2 male	×		=	
Proposed water use								=	
30% Reduction _____ (BWU from WS-1) × .70 = _____ Allowable water use 35% Reduction _____ (BWU from WS-1) × .65 = _____ Allowable water use 40% Reduction _____ (BWU from WS-1) × .60 = _____ Allowable water use									

- The daily use number shall be increased to three if urinals are not installed in the room.
- The flow rate is from the CEC Appliance Efficiency Standards, Title 20 *California Code of Regulations*; where a conflict occurs, the CEC standards shall apply.
- For low-rise 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, 2010 *California Plumbing Code*, for occupant load factors.
- 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 112.19.233.2.
 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 A 112.19.14.

