**INDOOR WATER USE**

**PRESCRIPTIVE APPROACH**

All fixtures must not exceed flow rates summarized below (from CalGreen Tables 5.303.2.2. & 5.303.2.3):

|  |  |  |
| --- | --- | --- |
| **Fixture Type** | **Maximum Prescriptive Flow**  **Rate** | **Referenced Standard from California Plumbing Code Table 1401.1** |
| **Showerheads2** | 2 gpm @ 80 psi | n/a |
| **Lavatory faucets - nonresidential** | 0.4 gpm @ 60 psi | ASME A112.18.1/CSA B125.1 |
| **Kitchen faucets** | 1.8 gpm @ 60 psi | n/a |
| **Wash fountains** | 1.8 [rim space (in.)/20 gpm @ | n/a |
| **Metering faucets** | .20 gallons/cycle | ASME A112.18.1/CSA B125.1 |
| **Metering faucets for wash fountains** | .20 [rim space (in.)/20 gpm @  60 psi] | n/a |
| **Tank-type water closets** | 1  EPA WaterSense Certified | U.S. EPA WaterSense Tank-Type High-Efficiency Toilet Specification |
| **Flushometer valve water closets** | 1.28 gallons/flush1 | ASME A112.19.2/CSA B45.1  - 1.28 gal (4.8 L) |
| **Urinals** | 0.5 gallons/flush | ASME A112.19.2/CSA B45.1  – 0.5 gal (1.9 L) |

City and County of San Francisco Green Building Submittal:

**Residential Additions and Alterations**

60 psi]

**Instructions:**

**REQUIREMENTS**

**Instructions:**

**VERIFICATION**

1.28 gallons/flush and

This form is for additions and alterations to residential occupancy which increase conditioned area, volume, or size of a residential building. See Administrative Bulleting 93, Attachment A, Table 1 for applicability. An abbreviated summary of each requirement is included for reference. Projects required to meet a LEED standard must use C-3 “Submittal for LEED Projects”, and projects required to meet GreenPoint Rated must use the C-4 “Submittal for GreenPoint Rated Projects.” Projects seeking certification may use the C-3 “Submittal for LEED Projects” or C-4 “Submittal for GreenPoint Rated” as alternatives to this form.

Check the box by each measure to indicate that you intend to comply with the listed requirement. For each requirement, use the “Plan Set Location” column to indicate where in the submittal documents compliance with the requirement can be verified. Requirements apply to areas and systems within the scope of addition and alteration. Where items are not applicable, indicate “N/A” in the “Reference” column.

**Required Measures Reference**

**(Indicate Plan Set Sheet & Detail, or Specification, where applicable)**

Indicate below who is responsible for ensuring green building requirements are met.

**Projects that increase total conditioned floor area by ≥1,000 square feet**

**are required to have a Green Building Compliance Professional of Record as described in Administrative Bulletin 93.** For projects that increase total conditioned floor area by <1,000 square feet, the applicant or design professional may sign below, and no license or special qualifications are required.

**FINAL COMPLIANCE VERIFICATION form will be required prior to Certificate of**

**Completion**.

Notes:

1) For dual flush toilets, effective flush volume is defines as the average volume of two reduced flushes and one full flush. The referenced standard is ASME A112.19.14 and USEPA WaterSense Tank-Type High Efficiency Toilet Specification – 1.28 gal (4.8 L).

**Type of Project:**

**Construction and Demolition Debris:** 100% of mixed debris must be transported by a registered hauler to a registered

**Residential Addition & Alteration**

Project Name

2) The combined flow rate of all showerheads in one shower stall not exceed the maximum flow rate for one showerhead, or the shower shall be designed to allow only one showerhead to be in operation at a time (5.303.2.1).

**OR**

**PERFORMANCE APPROACH**

**Instructions to applicant:**

Fill in all blank cells in both tables below. The number of occupants using each fixture type must be the same in both the Baseline and Design cases. If there are no fixtures of a type in your project, enter “0” for number of occupants. Multiply each row to determine the amount of water used in each fixture type, then sum the last column to determine the total daily water use. Take 80% of this baseline case to be the

maximum allowable water use (corresponding to the required 20% reduction). The Total Design Case Daily Water Usage use from Worksheet WS-2 must not exceed the Total Allowable Daily Water Usage from Worksheet WS-1.

facility and be processed for recycling, in compliance with the San Francisco Construction & Demolition Debris Ordinance ●

**Recycling by Occupants:** Provide adequate space and equal access for storage, collection and loading of compostable, recyclable and landfill materials. - See Administrative Bulletin 088.

●

**Water Efficient Irrigation:** Projects that include ≥ 1,000 square feet of new or modified landscape must comply with the San Francisco Water Efficient Irrigation Ordinance. (See the guide at [www.sfwater.org/landscape)](http://www.sfwater.org/landscape))

●

**Stormwater Control Plan:** Projects disturbing ≥ 5,000 square feet must implement a Stormwater Control Plan meeting SFPUC Stormwater Design Guidelines. (See [www.sfwater.org/sdg)](http://www.sfwater.org/sdg))

●

**Grading and paving:** Construction plans shall indicate how the site grading or drainage system will manage surface water flows to keep water from entering the building, such as swales, drains, or water retention gardens. (CalGreen 4.106.3)

●

**Smart Irrigation Controller:** Automatically adjust irrigation based on weather and soil moisture. Controllers must have either an integral or separate rain sensors that connects or communicates with the controller.

●

**Indoor Water Efficiency:**Install water-efficient fixtures and fittings as summarized in CalGreen 4.303 (See “Indoor Water

●

Efficiency” at left.) Replace all noncompliant fixtures in project area (CalGreen 3.301.1.1, San Francisco Housing Code 12A)

**Energy Efficiency:** Comply with California Energy Code (Title 24, Part 6 2013) ●

**Pest Protection:** Annular spaces around pipes, electric cables, conduits, or other openings in sole/bottom plates at

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Worksheet WS-1 (summary) - Baseline & Allowable Water Use** | | | | | | | |
| **Fixture Type** | **Daily use** |  | **Occupants 2** |  | **Baseline**  **Flow Rate** |  | **Baseline Usage**  **(gallons per day)** |
| **Showerhead** | 5 min. | x |  | x | 2.0 gpm | = |  |
| **Showerhead - residential** | 8 min. | x |  | x | 2.5 gpm | = |  |
| **Lavatory faucets** | 0.25 min. | x |  | x | 0.5 gpm | = |  |
| **Lavatory faucets - residential** | 0.25 min. | x |  | x | 2.2 gpm | = |  |
| **Kitchen faucets** | 4 min. | x |  | x | 2.2 gpm | = |  |
| **Metering faucets** | 3 | x |  | x | 0.25 gal | = |  |
| **Water closets**  **(all types)** | 1 male1  3 female | x |  | x | 1.28 gal | = |  |
| **Urinals** | 2 male | x |  | x | 0.5 gal | = |  |
| Total Baseline Case Daily Usage: | | | | | | |  |
| **Total Allowable Daily Water Usage (Baseline Usage x 80%):** | | | | | | |  |

Block/Lot

Address

Primary Occupancy

Gross Building Area

Increase In Conditioned Floor Area

**Projects that increase total conditioned floor area by ≥1,000 square feet:**

**The Green Building Compliance Professional of**

**Record for this project is:**

exterior walls shall be closed with cement mortar, concrete masonry, or a similar method acceptable to DBI for protection ●

against rodents.

**Moisture content of building materials:** Verify wall and floor framing does not exceed 19% moisture content prior to enclosure. Materials with visible signs of moisture damage shall not be installed. Moisture content shall be verified in compliance with the following: (CalGreen 4.505.3 )

1) Moisture content shall be determined with either a probe-type or a contact-type moisture meter. Equivalent moisture

verification methods may be approved by the enforcing agency and shall satisfy requirements in Section 101.8.

2) Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade-stamped end of each ●

piece to be verified.

3) At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing. Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Manufacturers’ drying recommendations shall be followed for wet-applied insulation products prior to enclosure

**Capillary break for concrete slab on grade:** Concrete slab on grade foundations required to have a vapor retarder must also have a capillary break, including at least one of the following: (CalGreen 4.505.2.)

1) A 4-inch (101.6 mm) thick base of 1/2-inch (12.7 mm) or larger clean aggregate shall be provided with a vapor retarder in direct contact with concrete and a concrete mix design which will address bleeding, shrinkage and curling shall be used.

●

Name

Firm

Architectural or Engineering License

□ I am a LEED Accredited Professional

□ I am a GreenPoint Rater

Notes:

1) The daily use number shall be increased to three if urinals are not installed in the room.

2) For non-residential occupancies, refer to table A, Chapter 4, 2010 California Plumbing Code for occupant load factors.

3) Fixtures and fittings must meet the standards referenced in **California Plumbing Code Table 1401.1**, see above.

For additional information, see American Concrete Institute, ACI 302.2R-06.

2) A slab design specified by a licensed design professional.

**Fireplaces and woodstoves:** Install only direct-vent or sealed-combustion appliances; comply with US EPA Phase

●

II limits. (CalGreen 4.503.1)

**Design and Install HVAC System to ACCA Manual J, D, and S** (CalGreen 4.507.2) ●

**HVAC Installer Qualifications:** HVAC system installers must be trained and certified in the proper installation of

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Worksheet WS-2 (summary) - Design Water Use** | | | | | | | |
| **Fixture Type** | **Daily use** |  | **Occupants 2** |  | **Design Flow**  **Rate** |  | **Design Usage**  **(gallons per day)** |
| **Showerhead** | 5 min. | x |  | x |  | = |  |
| **Showerhead - residential** | 8 min. | x |  | x |  | = |  |
| **Lavatory faucets** | 0.25 min. | x |  | x |  | = |  |
| **Lavatory faucets - residential** | 0.25 min. | x |  | x |  | = |  |
| **Kitchen faucets** | 4 min. | x |  | x |  | = |  |
| **Metering faucets** | 3 | x |  | x |  | = |  |
| **Water closets**  **(all types)** | 1 male1  3 female | x |  | x |  | = |  |
| **Urinals** | 2 male | x |  | x |  | = |  |
| **Total Design Case Daily Usage:** | | | | | | |  |

□ I am an ICC Certified CalGreen Inspector

I will assure that approved construction documents and construction fulfill the requirements of San Francisco Green Building Code. It is my professional opinion that the

HVAC systems, such as via a state certified apprenticeship program, public utility training program (with certification as ●

installer qualification), or other program acceptable to the Department of Building Inspection. (CalGreen 702.1)

**Covering duct openings and protecting mechanical equipment during construction:** Duct openings

and other air distribution component openings shall covered during all phases of construction with tape, plastic, sheetmet- ●

al, or other acceptable methods to reduce the amount of water, dust, and debris entering the system.

**Bathroom exhaust fans:** Must be ENERGY STAR compliant, ducted to terminate outside the building, and controlled

by humidistat capable of adjustment between relative humidity of less than 50% to maximum of 80%. Humidity control ●

may be a separate component from the exhaust fan.

**Carpet:** All carpet must meet one of the following: (CalGreen 4.504.3)

1. Carpet and Rug Institute Green Label Plus Program,

2. California Department of Public Health Standard Practice for the testing of VOCs (Specification 01350),

3. NSF/ANSI 140 at the Gold level,

requirements of the San Francisco Green Building Code will be met. I will notify the Department of Building Inspection if the project will, for any reason, not substantially comply with these requirements, if I am no longer the Green Building Compliance Professional of Record for the project, or if I am otherwise no longer responsible for assuring the compliance of the project with the San Francisco Green Building Code.

**EXISTING NONCOMPLIANT FIXTURES**

All fixtures that are not compliant with the San Francisco Residential Water Conservation Ordinance that serve or are

4. Scientific Certifications Systems Sustainable Choice, OR ●

5. California Collaborative for High Performance Schools EQ 2.2 and listed in the CHPS High Performance Product Database

AND carpet cushion must meet Carpet and Rug Institute Green Label,

AND indoor carpet adhesive & carpet pad adhesive must not exceed 50 g/L VOC content.

**Resilient flooring systems:** For 80% of floor area receiving resilient flooring, install resilient flooring complying with:

1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program,

●

2. Compliant with the VOC-emission limits and testing requirements of California Department of Public Health 2010

Standard Method for the Testing and Evaluation Chambers v.1.1, *OR*

3. Compliant with the Collaborative for High Performance Schools (CHPS) EQ2.2 and listed in the CHPS High

●

Performance Product Database, OR

4. Certified under the Greenguard Children & Schools Program to comply with California Department of Public Health criteria.

**Composite wood products:** Hardwood plywood, particleboard, and medium density fiberboard composite wood products

Licensed Professional: Sign & Date1

(May be signed by the applicant when less than 1,000 square feet is added.)

Affix professional stamp:

located within the project area must be replaced with fixtures or fittings meeting the maximum flow rates and standards referenced above. For more information, see the Commercial Water Conservation Program Brochure, available at SFDBI.org. Noncompliant plumbing fixtures include:

Attachment C-7:

Residential Additions and Alterations

Insert Project Name / Titleblock here

Version: July 1, 2014

(1) Any toilet manufactured for use more than 1.6 gallons of water per flush. (2) Any urinal manufactured for use more than 1 gallon of water per flush.

(3) Any showerhead manufactured to have a flow capacity of more than 2.5 gallons of water per minute. (4) Any interior faucet that emits more than 2.2 gallons of water per minute.

Exceptions to this requirement are limited to situations where replacement of fixture(s) would detract from the historic integrity of the building, as determined by the Department of Building Inspection pursuant to San Francisco Building Code Chapter 13A.

used on interior or exterior shall meet CARB Air Toxics Control Measure for Composite Wood. See CalGreen Table 4.504.5. ●

**Interior paints and coatings:** Comply with VOC limits in the Air Resources Board Architectural Coatings Suggested

●

Control Measure and California Code of Regulations Title 17 for aerosol paints. See CalGreen Table 4.504.3.

**Low-VOC aerosol paints and coatings:** Meet BAAQMD VOC limits (Regulation 8, Rule 49) and Product- Weighted MIR Limits for ROC. (CalGreen 4.504.2.3.)

●

**Low VOC Caulks, Construction adhesives, and Sealants:** Meet SCAQMD Rule 1168. See CalGreen Tables

●

4.504.1 and 4.504.2. (CalGreen 4.504.2.1)