BATHROOM REMODEL REQUIREMENTS

INFORMATION GUIDELINE

August 2020 **B**

City of Pleasant Hill • Building Division • 100 Gregory Lane • Pleasant Hill, CA 94523
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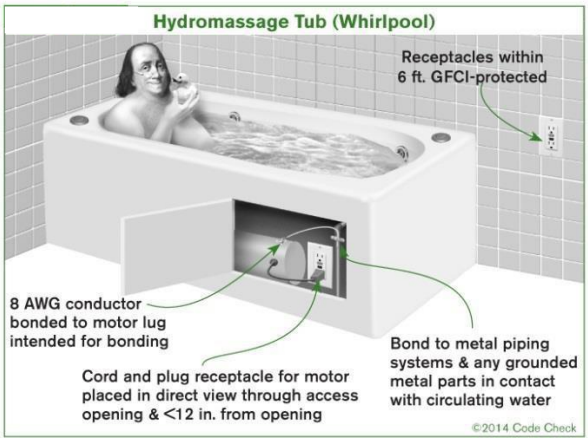
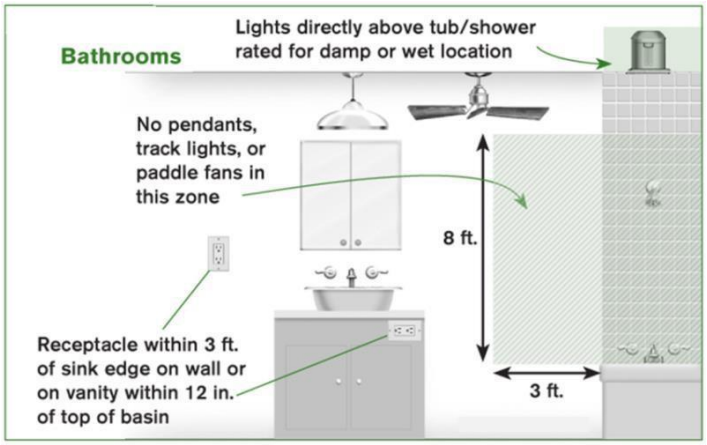
Applicable codes are the 2019 editions of the California Residential Code (CRC), California Electrical Code (CEC), California Plumbing Code (CPC), California Mechanical Code (CMC), California Energy Code (CNC) and the California Green Building Standards Code (GRN).

Bath Electrical:

- ☐ All installed lighting shall be high efficacy. [CNC 150.0(k) 1A].
- ☐ At least one light shall be controlled by a vacancy sensor (a manual-on, automatic-off occupancy sensor). [CNC 150.0(k) 2A]
- ☐ Exhaust fans shall be switched separate from lighting, with the exception that lighting integral to an exhaust fan can be on the same switch if the fan is controlled by a humidistat that continues its operation after the light is off. (For humidistat requirements, see Mechanical).
- ☐ All receptacle outlets in bathrooms shall be GFCI protected [CEC 210.8A1].
- ☐ All receptacle outlets in bathrooms shall be tamper resistant [CEC 406.12A].
- ☐ When a bathtub or shower stall is in an area not technically considered a bathroom (by the definitions in the electrical code), receptacles within 6 ft. of the tub/shower stall must be GFCI- protected. [CEC210.8A9].
- ☐ A receptacle outlet is required within 3 feet of each wash basin location. It may be on the wall, or an adjacent partition, or on the face or side of the cabinet not more than 12 inches below the top of the basin [CEC 210.52D]. Previous to 2016 code it was measured the 12 inches from the top of the vanity. Basins such as that in the figure below are sometimes well above the top of the vanity).
- ☐ Receptacles cannot be face-up in a vanity surface; listed pop-up receptacles are allowed [CEC 406.5E & 210.52D].
- ☐ A minimum of one 20-amp circuit is required for the receptacles in the bathroom(s). This circuit can have no other outlets, including lights [CEC 210.11C3]. If a 20-amp circuit serves only one (1) bathroom, lights and fans can be on the same circuit with the receptacles in that bathroom [CEC 210.11C3 exception].
- ☐ Hydro-massage tubs require an individual (dedicated) branch circuit and readily accessible GFCI protection [CEC 680.71]. An access door is required and must be large enough to remove the motor and pump. Cord-connected equipment must have the receptacle facing the opening and be no more than one foot behind the access hatch [CEC 680.73].





- ☐ Recessed light fixtures in shower enclosures shall be listed for a damp or wet location [CEC 410.10A]
- ☐ Pendant light fixtures, track lights, and paddle fans shall not be installed lower than 8 feet above the flood-level rim of a tub, including the area 3 feet past the edge of the tub [CEC 410.10D].
- ☐ Electrical panels shall not be installed in bathrooms [CEC 240.24E].
- ☐ Switches and receptacles are not allowed in bathtub or shower spaces [CEC 404.4C & 406.9C].

Bathroom Plumbing, General:

- ☐ All piping ¾ inch or more in diameter and all hot water pipes associated with a recirculation system shall be insulated with min. 1-inch thick insulation. Existing inaccessible piping shall not require insulation [CNC 150.0(j) 2].
- ☐ Newly installed plumbing fixtures shall be water-conserving in compliance with the California Plumbing Code and Green Building Standards. Water closets shall not exceed 1.28 gallons per flush, showerheads shall not exceed 1.8 GPM and new lavatory faucets shall not exceed 1.2 GPM at 60 PSI. [CPC 407.2, 408.2 & 411.2] All Existing plumbing fixtures not included in the scope of new work shall be replaced if necessary to comply with SB407 Plumbing Fixtures Replacement requirements – See Water Conservation Certification Form.

INDOOR WATER USE:
(Requirements for homes built on or before 01/01/1994)

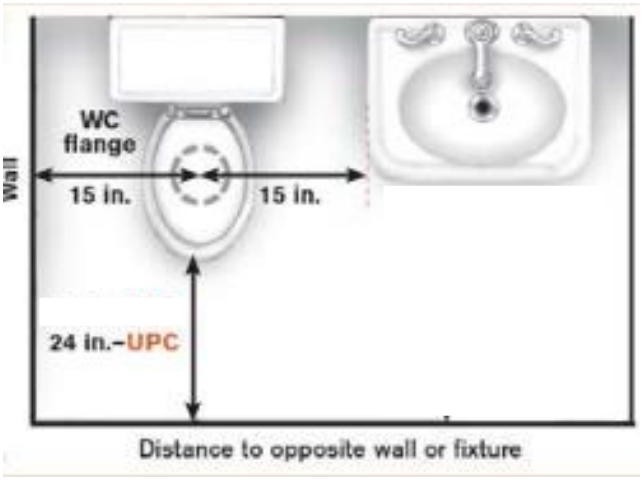
Fixture Type	Non-Compliant (1994) (flow rater over)	Conserving Fixtures (Current) (Max flow rate)
Kitchen Faucet	2.2 Gal/min	1.8 Gal/min @ 60 psi
Other Faucets	2.2 Gal/min	1.2 Gal/min @ 60 psi
Shower	2.5 Gal/min	1.8 Gal/min @ 80 psi
Water Closet	1.6 Gal/min	1.28 Gal/flush

(Flow rates combined for all heads controlled by a single valve)

Bathroom Plumbing, Toilets & Bidets:

- ☐ Toilets and bidets shall require a minimum 15 inches of clearance from the center line of the bowl to each side, and 24 inches of clearance from the front edge of the bowl [CPC 402.5]. The maximum flow rate is 1.28 GPF [CPC 403.2.1].
- ☐ Lavatory sinks shall require a minimum of 24 inches' front clearance [CPC 402.5].

- ☐ Showers require a minimum 2-inch drain and trap [CPC Table 702.1].
- ☐ All shower compartments shall have a minimum finished interior of 1024 square inches and shall be capable of encompassing a 30-inch diameter circle [CPC 408.6]. The curb may encroach on these size requirements. All surfaces shall be waterproof up to 72 inches above the drain inlet [CRC R307.2]. Thresholds shall be of sufficient width to accommodate a minimum 22-inch clear egress opening from the shower [CPC 408.5].
- ☐ Safety glass (tempered or laminated) is required for all glass shower doors and partitions and for windows in walls facing the tub or shower and located less than 60 inches above the standing surface of the tub/shower and within 60 inches horizontally [CRC R308.4.1&5].
- ☐ The maximum water temperature to a shower or tub/shower combination is 120°F. The water heater thermostat cannot be used as the control for this temperature. Valves shall provide scald and thermal shock protection, and be pressure-balanced, thermostatic, or combination pressure-balanced/thermostatic mixing in accordance with ASSE 1016 or ASME A112.18.1/CSA B125.1. [CPC 408.3].



Mechanical:

- ☐ Mechanical ventilation is required in all bathrooms with tubs or showers. The fan shall move a minimum 50 CFM of air and be separately switched from the lighting. Fans that operate continuously can be 20 CFM. The duct must terminate on the exterior not less than 3 feet from openings into the building [CMC 502.2.1].
- ☐ Baths with no tub or shower (half baths) shall not require mechanical ventilation if they are provided with a window at least 3 sq. ft. half of which is openable [CRC R303.3].
- ☐ A humidistat is required to be added if any of the following conditions apply:
    1. New construction or addition.
    2. When increasing the volume of an existing bathroom.
    3. When eliminating an existing openable window.
    4. When adding a new fan or replacing an existing fan.

  Note: Humidity control may be integral to the fan or located at the switch.

  [Green Code 4.506.1]

Tile & Backing:

As of January 1, 2008, per CBC **all <u>paperbacked</u> gypsum board products such as "Green board", "Purple board", and "Mold Resistance board" is prohibited in shower and tub compartments and shall not be used as backer for tile lath or concrete/hardy board.** Recommend DensShield Tile Backer.

Air admittance valves are not allowed.

- ☐ Water-resistant gypsum board (purple board) may be used as a tile backer board in areas that are not subject to direct exposure to water or high humidity [CRC R702.3.7.1]. Examples would be a wall behind a toilet or above a vanity countertop. ***Purple board shall not be used in a shower*** for direct application of tile. It may be used in showers behind a water-resistive membrane with mortar bed and lath. Other acceptable materials for application of tile in showers include cement board, fiber-cement or glass mat gypsum backers [CRC R702.4.2].
- ☐ A water-resistive vapor barrier is required in shower compartments behind cement board, fiber-cement or glass mat gypsum backers. One-layer minimum of Grade B paper is required, installed in a watershed fashion and per manufacturer instructions.

Top three frequently missed/inspection failures:
1. WRONG BACKER BOARD 2. WRONG FASTENERS 3. WRONG TEST PLUG