

**FINAL EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
REGARDING THE REVISION OF THE
2007 CALIFORNIA PLUMBING CODE (CPC)
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5
(HCD 01/07)**

The Department of Housing and Community Development (HCD) proposes to revise the 2007 edition of the California Plumbing Code (CPC) as presented on the following pages. HCD further proposes to:

- Repeal amendments to the model codes that are no longer necessary, repeal or amend building standards that are not addressed by a model code;
- Relocate or codify existing adopted and necessary amendments to the model code, the action of which has no regulatory effect; adopt new necessary amendments to the model code proposed for adoption; and/or
- Adopt new building standards that are not addressed by the model code.

LEGEND FOR EXPRESS TERMS:

1. **Existing California amendments or code language being modified:** *All language appears in italics, modified language is underlined or shown in ~~strikeout~~.*
 2. **UPC language with new California amendments:** UPC language shown in normal Arial 9 point; *California amendments to UPC text shown underlined and in italics.*
 3. **Repealed text:** All language appears in ~~strikeout~~.
 4. **Notation:** Authority and Reference citations are provided at the end of each section.
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1. Amend Section 211.0 as follows:

**CHAPTER 2
DEFINITIONS**

211.0 - I -

Insanitary – A condition that is contrary to sanitary principles or is injurious to health.

Conditions to which “insanitary” shall apply include the following:

- (1) Any trap that does not maintain a proper trap seal.
- (2) Any opening in a drainage system, except where lawful, that is not provided with an approved water-sealed trap.
- (3) Any plumbing fixture or other waste-discharging receptor or device that is not supplied with water sufficient to flush and maintain the fixture or receptor in a clean condition.

Exception: [HCD1 & HCD2] Non-water supplied urinals.

- (4)..... (text unchanged)
- (5) (text unchanged)
- (6)..... (text unchanged)

(7)..... (text unchanged)

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.
Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

2. Amend Section 216.0 as follows:

216.0 – N –

Non-Water Supplied Urinal (Waterless Urinal) [HCD1 & HCD2] – A plumbing fixture which does not require water supply and is designed to receive and convey the uninhibited flow of liquid waste to the gravity drainage system.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.
Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

3. Amend Section 316.1.6 as follows:

**CHAPTER 3
GENERAL REGULATIONS**

316.1.6 Solvent Cement Plastic Pipe Joints. Plastic pipe and fittings designed to be joined by solvent cementing shall comply with appropriate IAPMO Installation Standards.

ABS pipe and fittings shall be cleaned and then joined with solvent cement(s).

CPVC pipe and fittings shall be cleaned and then joined with listed primer(s) and solvent cement(s).

Exceptions:

(1) Listed solvent cements that do not require the use of primer shall be permitted for use with CPVC pipe and fittings, manufactured in accordance with ASTM D2846, ½ inch through 2 inches in diameter.

(2) *[HCD 1 & HCD 2] Low VOC One-Step Cement that does not require the use of primer shall be utilized with CPVC pipe and fittings, manufactured in accordance with ASTM D2846, ½ inch through 2 inches in diameter.*

PVC pipe and fittings shall be cleaned and joined with primer(s) and solvent cement(s).

A solvent cement transition joint between ABS and PVC building drain or building sewer shall be made using listed transition solvent cement.

~~*[HCD 1 & HCD 2] For applications listed in Sections 108.2.1.1 through 108.2.1.3 regulated by the Department of Housing and Community Development, plastic Plastic pipe and fittings joined with solvent cement shall utilize Low-VOC primer(s), if a primer is required, and Low-VOC solvent cement(s) as defined in Section 215.*~~

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.
Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

4. Amend Section 402.1 as follows:

CHAPTER 4 PLUMBING FIXTURES AND FIXTURE FITTINGS

402.1 Flush volumes for low-consumption and water-saver water closets and urinals shall be in accordance with applicable standards referenced in Table 14-1. ~~[HCD 1 & HCD 2] Flow rates for shower heads and faucets shall meet the requirements of this section and applicable standards referenced in Table 14-1. [HCD 1 & HCD 2] See Health and Safety Code Section 17921.3.~~

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

5. Add Sections 402.1.1 and 402.1.2 as follows:

402.1.1 Shower Heads [HCD 1 & HCD 2] *Shower heads shall be designed and installed so that they will not exceed a water supply flow rate of 2.5 gallons (9.4 liters) per minute measured at 80 psi.*

402.1.2 Faucets [HCD 1 & HCD 2] *Faucets at kitchens, lavatories, wetbars, laundry sinks, or other similar use fixtures shall be designed and manufactured so that they will not exceed a water supply flow rate of 2.2 gallons (8.3 liters) per minute measured at 60 psi.*

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

6. Add Sections 402.2.1 and 402.2.2 as follows:

402.2.1 Water Closets after January 1, 1994 [HCD 1 & HCD 2] *Water closets, either flush tank, flushometer tank, or flushometer valve operated sold or installed after January 1, 1994, shall use no more than an average of 1.6 gallons (6.1 liters) of water per flush. See Health and Safety Code Section 17921.3.*

402.2.2 Water Closets on or after July 1, 2011 [HCD 1 & HCD 2] *Water closets, either flush tank, flushometer tank, or flushometer valve operated sold or installed on or after July 1, 2011, shall have an effective flush volume in compliance with the following:*

(1) Single Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters) when tested in accordance with ASME A112.19.2.

(2) Dual Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters) when tested in accordance with ASME A112.19.2 and ASME A112.19.14.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

7. Add Sections 402.3.1, 402.3.2 and 402.3.3 as follows:

402.3.1 Urinals after January 1, 1994 [HCD1 & HCD2] *Urinals and associated flushometer valves sold or installed after January 1, 1994, shall use no more than an average of one gallon (3.8 liters) per flush. See Health and Safety Code Section 17921.3.*

402.3.2 Urinals on or after July 1, 2011 [HCD1 & HCD2] *Urinals and associated flushometer valves sold or installed on or after July 1, 2011, shall use no more than 0.5 gallons (1.9 liters) per flush and meet performance criteria as established in ASME A112.19.2.*

402.3.3 Non-Water Supplied Urinals (Waterless Urinals) [HCD1 & HCD2] *Waterless urinals sold or installed in this state shall comply with all of the following requirements:*

1) Meet performance, testing, and labeling requirements established by ASME A112.19.19-2006 for vitreous china non-water supplied urinals.

2) Be listed by an ANSI accredited third-party certification agency to ASME A112.19.19-2006.

3) Follow cleaning and maintenance procedures established by the manufacturer.

4) Conform to reference standards in Table 14-1 for non-vitreous ceramic or plastic urinal fixtures.

5) Provide water distribution and fixture supply piping, sized as required elsewhere in this code, roughed-in immediately adjacent to each waterless urinal fixture installed.

For additional information, see Health and Safety Code Section 17921.4

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

8. Amend Section 405.2 as follows:

405.2 Prohibited Urinals. Floor-type and wall-hung type trough urinals shall be prohibited. Urinals that have an invisible seal or that have an unventilated space or wall that is not thoroughly washed at each discharge shall be prohibited.

Exception: [HCD1 & HCD2] Non-water supplied urinals.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

9. Amend Table 6-4 as follows:

**CHAPTER 6
WATER SUPPLY AND DISTRIBUTION**

TABLE 6-4^{1,2,3}

Material	Water Distribution Pipe and Fittings		Building Supply Pipe and Fittings
	Hot	Cold	
Asbestos – Cement			X
Brass	X	X	X
Copper	X	X	X
Cast Iron	X	X	X
CPVC	X	X	X
Galvanized Malleable Iron	X	X	X
Galvanized Wrought Iron	X	X	X
Galvanized Steel	X	X	X
PE			X
PE-AL-PE	X	X	X
PEX ^{1,2,3}	X	X	X
PEX-AL-PEX ¹	X	X	X
PVC			X

¹ [For BSC, DSA/SS & HCD] The use of PEX and PEX-AL-PEX in potable water supply systems is not adopted for applications under the authority of the California Building Standards Commission and the Division of State Architect – Structural Safety and the Department of Housing and Community Development.

² When PEX tubing is placed in soil and is used in potable water systems intended to supply drinking water to fixtures or appliances, the tubing or piping shall be sleeved with a material approved for potable water use in soil or other material that is impermeable to solvents or petroleum products.

³ PEX tubing shall meet the requirements of NSF P171 CL-R, ASTM F 876-08 or an equivalent or more stringent standard when used in continuously recirculating hot water systems where chlorinated water is supplied to the system and the PEX tubing is exposed to the hot water 100% of the time.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

10. Amend Section 604.1.1 (first paragraph) and subsections (c), (d) and (f) as follows:

604.1.1. Local Authority to Approve CPVC Pipe Within Residential Buildings Under Specified Conditions.
[HCD 1 & HCD 2] ~~The local responsible building official of any city, county, or city and county, in accordance with the procedures set forth in Chapter 3 shall authorize by permit the use of CPVC for hot and cold water distribution systems within the interior of residential buildings provided all of the following conditions are satisfied:~~

(a) Permit Conditions. Any building permit issued pursuant to Section 604.1.1 shall be conditioned on compliance with the mitigation measures set forth in this section.

- (b) **Approved Materials.** Only CPVC plumbing material listed as an approved material and installed in accordance with this code may be used.
- (c) **Installation and Use.** Any installation and use of CPVC plumbing material pursuant to this section shall comply with all applicable requirements of this code and Section ~~304.0~~ 1.2 of Appendix I of this code, Installation Standard for CPVC Solvent Cemented Hot and Cold Water Distribution Systems, IAPMO IS 20-2005.
- (d) **Certification of Compliance.** Prior to issuing a building permit pursuant to Section 604.1.1, the building official shall require as part of the permitting process that the contractor, or the appropriate plumbing subcontractors, provide written certification: (1) that is required in subdivision (e), and (2) that he or she will comply with the flushing procedures and worker safety measures set forth in Section ~~304.0~~ 1.2 of Appendix I of this code, Installation Standard for CPVC Solvent Cemented Hot and Cold Water Distribution Systems, IAPMO IS 20-2005.
- (e) **Worker Safety.** Any contractor applying for a building permit that includes the use of CPVC plumbing materials authorized pursuant to this section shall include in the permit application a signed written certification stating that:
- (1) They are aware of the health and safety hazards associated with CPVC plumbing installations;
 - (2) They have included in their Injury and Illness Prevention Plan the hazards associated with CPVC plumbing pipe installations; and
 - (3) The worker safety training elements of their Injury and Illness Prevention Plan meet the Department of Industrial Relation's guidelines.
- (f) **Findings of Compliance.** The building official shall not give final permit approval of any CPVC plumbing materials installed pursuant to Section 604.1.1 unless he or she finds that the material has been installed in compliance with the requirements of this code and that the installer has complied with the requirements in Section 1.2.1 of Appendix I of this code, Installation Standards for CPVC Solvent Cemented Hot and Cold Water Distribution Systems, IAPMO IS 20-2005.
- (g) **Penalties.** Any contractor or subcontractor found to have failed to comply with the ventilation, glove or flushing requirements of Section 1.2.2 of Appendix I of this code, Installation Standards for CPVC Solvent Cemented Hot and Cold Water Distribution Systems, IAPMO IS 20-2005 shall be subject to the penalties in Health and Safety Code, Division 13, Part 1.5, Chapter 6 (Section 17995 et. seq.). In addition, if during the conduct of any building inspection the building official finds that the ventilation and glove requirements of Section 1.2.2 of Appendix I of this code, "Special Requirements for CPVC Installation within Residential Buildings," are being violated, such building officials shall cite the contractor or subcontractor for that violation.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

11. Amend Sections 604.11, 604.11.1 and 604.11.2 as follows:

604.11 PEX. ~~[Not Adopted by HCD]~~ Cross-linked polyethylene (PEX) tubing shall be marked with the appropriate standard designation(s) listed in Table 14-1 for which the tubing has been approved. PEX tubing shall be installed in compliance with the provisions of this section.

604.11.1 PEX Fittings. ~~[Not Adopted by HCD]~~ Metal insert fittings, metal compression fittings, and cold expansion fittings used with PEX tubing shall be manufactured to and marked in accordance with the standards for the fittings in Table 14-1.

604.11.2 Water Heater Connections. ~~[Not Adopted by HCD]~~ PEX tubing shall not be installed within the first eighteen (18) inches (457mm) of piping connected to a water heater.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

12. Amend Section 1003.1 as follows:

**CHAPTER 10
TRAPS AND INTERCEPTORS**

1003.1 Each trap, except for traps within an interceptor or similar device, shall be self-cleaning. Traps for bathtubs, showers, lavatories, sinks, laundry tubs, floor drains, urinals, drinking fountains, dental units, and similar fixtures shall be of standard design and weight and shall be of ABS, cast brass, cast iron, lead, PP, PVC, or other approved material. An exposed and readily accessible drawn brass tubing trap, not less than 17 B&S Gauge (0.045 inch) (1.1 mm), may be used on fixtures discharging domestic sewage.

Exceptions:

- (1) Drawn brass tubing traps shall not be used for urinals. Each trap shall have the manufacturer's name stamped legibly in the metal of the trap and each tubing trap shall have the gauge of the tubing in addition to the manufacturer's name. Every trap shall have a smooth and uniform interior waterway.
- (2) [HCD1 & HCD2] Non-water supplied urinals conforming to ASME A112.19.19-2006 or reference standards in Table 14-1 for non-vitreous ceramic or plastic urinal fixtures.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

13. Amend Section 1005.0 as follows:

1005.0 Trap Seals. Each fixture trap shall have a water seal of not less than two (2) inches (51 mm) and not more than four (4) inches (102 mm), except where a deeper seal is found necessary by the Authority Having Jurisdiction. Traps shall set true with respect to their water seals and, where necessary, they shall be protected from freezing.

Exception: [HCD1 & HCD2] Non-water supplied urinals conforming to ASME A112.19.19-2006 or reference standards in Table 14-1 for non-vitreous ceramic or plastic urinal fixtures.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17921, 17921.3, 17921.4, 17922, 18300, 18865, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17995.5, 18630, 18640, 18690, 18873.1, 18873.2, 18873.4 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.
