

Significant Changes, 2000 to 2006 UPC and UMC With 2007 California Amendments

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International Code Council Update

Status of California Codes- Effective January 1, 2008

Reasons for Changes to UPC and UMC

- IAPMO/ NFPA/ WFCA C3 set of codes
- UPC, UMC, NFPA 54 National Fuel Gas Code
- ANSI accreditation (2003 UPC and UMC)
- Incorporate NFPA documents
- Coordinate UPC and UMC- correlation and duplication
- Consistent terminology
- Processed code proposals

Additional Influences and Impacts

- International Codes
- Industry and materials recognition
- ICC agreements with AGA (IFGC and IRC) and NFPA (IRC)
- Net result- the codes are becoming more similar

California Changes

- Same (i.e. ABS/PVC, PEX, PEX-AL-PEX, EIR, Lpg)
- Different (i.e. CPVC, PE-AL-PE, minimum plumbing facilities)
- Errors (i.e. furnaces in underfloor spaces, CPC Appendix G, missed items, and typos) and changes (expect many future updates)

California Plumbing Code and UPC Changes

1. AHJ (NEC term)
2. CA- use model code Chapters 2-16 for non state regulated occupancies
3. CA-conflicts with other parts of T24, apply most restrictive (vs. Sec 101.4.1.4)
4. CA- limited-density owner-built rural dwelling
5. FOG, gravity grease interceptor (minimum 300 gallons), grease interceptor (trap), grease removal device (hydromechanical grease interceptor)
6. CA- OSHPD limit overhead piping and floor drains
7. CA- SFM limit flame spread to 75 for exposed plastic piping
8. Ratproofing at tub waste
9. CPVC one-step cement (CA- HCD mandates use), ABS/PVC transition cement at building drain/sewer
10. CA- HCD dielectric union required at joint of dissimilar metals
11. CA- HCD, OSHPD drinking fountain 2" jet stream, orifice protected
12. Shower replacing existing bathtub (TIA- min 30" x 60", see IPC Sec. 417.4, 25", 1,300 sq ")
13. CA- DSA-AC alter 50% square footage, requires WC per Tables 4-1 and 4-4
14. CA- OSHPD requires separate toilet facilities

15. CA- Cosmetology fixture requirements
16. Max 120 degrees F discharge from public lavatories (CA- max 110 degrees), bathtubs, and whirlpool bathtubs- ASSE 1070 device versus ASSE 1016 thermostatic, pressure balance, or combination shower mixing valve
17. CA- Table 4-1 footnote 19, AHJ may approve alternate criteria for minimum plumbing facilities (errata- more direct reference to IBC), additional Tables 4-2, 4-3, 4-4
18. Table A Occupant Load Factor “from CBC 2001, Table A-29A”
19. Water Heaters, 55 pages- NFPA 54, location, upper only and mechanical combustion air, venting, reduction of clearances, no restriction on lpg appliances (CA- HCD restricts in CMC)
20. CA- HCD, SFM all water heaters must be anchored
21. CA- SFM backflow not required on class 1 or 2 fire sprinkler systems (H&S Code Section 13114.7)
22. Table 6-4 for water distribution materials (CA- PEX, PEX-AL-PEX not permitted, CPVC safety precautions)
23. CA- limit on lead content 1/1/2010, OSHPD and Cosmetology water supply and distribution requirements
24. CA- HCD, OSHPD (not DSA) ABS/PVC limited to not more than two stories of residential accommodation
25. Replacing sewers with trenchless methodology (TIA)
26. Bathroom wet venting
27. Table 10-3 gravity grease interceptor sizing (min 500 gallons) based on DFU
28. Storm drainage- scuppers, combined primary and secondary roof drains
29. CA- HCD subsoil drainage only when required by the AHJ
30. Chapter 12 (NFPA 54)
 - Table 12-1 btu input for appliances
 - materials ASTM D2513
 - excess flow valve “when...used”
 - underground minimum cover (18”, 12”, or less)
 - AWG 14 or tape tracer above ground on one end
 - piping in ceiling locations permitted, prohibited locations
 - concealed ground joint union with the nut center-punched to prevent loosening by vibration
 - sediment traps
 - valves at regulators
 - electrical bonding
 - pipe sizing (longest length, branch length, hybrid pressure, 35 tables)
 - equipment shutoff valve within 6 feet of appliance
 - test pressure (1.5 x working pressure, min 3 psi, scale 5x test pressure, conflict with Sec 319.4, test duration 10 minutes, longer for large systems)
 - purging for 2” or 3” diameter and larger systems
31. CA- did not make any amendments to the piping materials recognized in the UPC (i.e. black and galvanized steel, brass, copper, aluminum, CSST, PE, PVC)
32. CA- DSA earthquake-actuated gas shutoff valves (certified by State Architect) provided when installation is required by local ordinance
33. Chapter 13 (NFPA 99, NFPA 101)
34. CA- OSHPD medical gas per NFPA 99-2005
35. Chapter 16 Gray water (and reclaimed water)
36. Appendix C deleted (some info now in Chapter 5), Appendix F Firefighting Air Replenishment Systems, Appendices G and J moved to Chapter 16, Appendix H deleted

37. IS 16 Low Pressure Air Test for Sewers deleted, IS 20 CPVC (one-step cement added), IS 27 Odor Control Systems for Water Closets, IS 28 PEX-AL-PEX Hot and PE-AL-PE Cold Water Distribution Systems (code now allows for hot and cold), SIS 1-2003 Flexible PVC Hose (pools, spas, tubs), SIS 2-2003 Assembled Whirlpool Bathtub Appliances
38. CA- adopts Appendix Chapter 1 (Administration) and Appendices A, B, D, G (mistake, corrected with Addendum #1)), I, and K

California Mechanical Code and UMC Changes

1. Same as UPC
2. CA- extensive OSHPD amendments
3. CA- HCD definition of family “live together in a dwelling unit”
4. CA- HCD definition of nuisance as defined in H&S Code Section 17920(k)
5. No restrictions on lpg appliances, CA- HCD has lpg limitation
6. Chapter 4 Ventilation from ASHRAE 62, CA- refer to California Energy Code
7. Commercial Hoods and Kitchen Ventilation- NFPA 96, no exhaust system required for UL 197 listed reduced emissions equipment, exhaust duct clearances (18” combustible, 3” limited combustible, 0” noncombustible), field applied and factory built grease duct enclosures, grease removal, access openings in ducts, fire extinguishing, maintenance, recirculating hood systems
8. CA- DHS requires Class I grease filters
9. CA- SFM requires fire-resistive grease duct enclosure, automatic fire extinguishing system of wet chemical, CO₂, or fire sprinkler and retroactive requirements in conformance with UL 300
10. Sec 604.1- duct installation shall provide minimum 18” vertical clearance for access in crawl space
11. CA- HCD duct sizing not required for existing duct systems
12. CA- SFM shut down of HVAC system on activation of smoke-fire damper
13. Combustion air- one upper opening, combination indoor and outdoor air, NFA (25% wood, 75% metal), no max screen opening size
14. Multiple appliance venting and type B connectors- horizontal limited to 100% of vent height
15. GAMA vent sizing charts
16. Furnace and boiler in bedroom or bathroom- listed, gasketed, self-closing door with exterior combustion air
17. Guards required on roof if equipment within 6’ of edge (note: IBC -10’)
18. Buildings greater than 15’ in height require interior access to equipment on roof
19. Appliances in attic can be more than 20’ from access if minimum 6’ height (Sections 904.11 and 931.0 conflict)
20. Unvented room heaters permitted (max 6,000 btuh in bathrooms and 10,000 btuh in bedrooms, oxygen depletion safety shutoff system required), CA- HCD unvented fuel-burning room heaters prohibited in Group R Occupancy
21. Underfloor appliance installation and wall furnace clearances not addressed. Several other appliances added (i.e. illuminating appliances and gas-fired toilets), CA- HCD adds Section 932 warm-air furnace requirements in underfloor spaces
22. Chapter 13 Fuel Gas Piping- 62 pages, CA- no amendments, as are found in CPC Chapter 12
23. CA- HCD Section 1500.0 refers to H&S Code Section 17959.1 and Civil Code Section 801.5 for solar installation
24. Appendix B Procedures to be Followed to Place Gas Equipment in Operation- portions reproduced from NFPA 54 Chapter 11
25. CA- adopts Appendix Chapter 1 and Appendices A, B, C, and D