



**FINAL EXPRESS TERMS
FOR PROPOSED BUILDING STANDARDS
OF THE DIVISION OF THE STATE ARCHITECT—STRUCTURAL SAFETY
(DSA-SS AND DSA-SS/CC)
REGARDING THE 2019 CALIFORNIA PLUMBING CODE,
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5
(DSA-SS/CC 04/18)**

The State agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific (Government Code, § 11346.2[a][1]).

The Division of the State Architect (DSA) proposes to adopt the 2018 edition of the Uniform Plumbing Code (UPC) as the 2019 edition California Plumbing Code (CPC), for application by DSA-SS to public elementary and secondary schools, community colleges, and state-owned or state-leased essential services buildings.

DSA also proposes to adopt the 2018 edition of the UPC as the 2019 edition CPC, for application by DSA-SS/CC to community colleges, which a community college district may elect to use in lieu of standards promulgated by DSA-SS (refer to Education Code, § 81053).

DSA further proposes to:

Repeal the 2015 edition UPC articles adopted as the 2016 edition CPC.

Repeal amendments to the model code 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 into the format of the model code proposed for adoption, 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 proposed for adoption.

LEGEND FOR EXPRESS TERMS:

1. Model Code language appears upright.
2. Existing California amendments appear in *italics*.
3. Amended model code or new California amendments appear *underlined and in italics*.
4. Repealed model code language appears ~~upright and in strikeout~~.

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5. Repealed California amendments appear in *italics* and ~~strikeout~~.

FINAL EXPRESS TERMS

(All existing California amendments that are not revised below shall continue without change).

DSA proposes to carry forward existing California amendments in Chapter 1 (Administration) from the 2016 CPC, including minor editorial edits noted, for adoption into the 2019 edition CPC.

Adopting Agency	DSA-SS	DSA-SS/CC	Comments
Adopt only those sections that are listed below	X	X	
1.1.1	X	X	
1.1.2	X	X	
1.1.3	X	X	
1.1.4	X	X	
1.1.5	X	X	
1.1.6	X	X	
1.1.7	X	X	
1.1.8	X	X	
1.1.9	X	X	
1.1.10	X	X	
1.1.11	X	X	
1.1.12	X	X	
1.9.0	X	X	
1.9.2	X	X	
1.9.2.1	X		
1.9.2.1.1	X		
1.9.2.2		X	
1.9.2.2.1		X	

CHAPTER 1 ADMINISTRATION

DIVISION I CALIFORNIA ADMINISTRATION DIVISION I CALIFORNIA ADMINISTRATION

1.1.0 General.

1.1.1 Title. *These regulations shall be known as the California Plumbing Code, may be*

cited as such and will be referred to herein as "this code." The California Plumbing Code is Part 5 of thirteen parts of the official compilation and publication of the adoption, amendment, and repeal of plumbing regulations to the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This part incorporates by adoption the 2018~~5~~ Uniform Plumbing Code of the International Association of Plumbing and Mechanical Officials with necessary California amendments.

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1.9.0 Division of the State Architect.

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1.9.2 Division of the State Architect – Structural Safety.

1.9.2.1 DSA-SS (Division of the State Architect – Structural Safety).

Application – Public elementary and secondary schools, community college buildings, and state-owned or state-leased essential services buildings.

Enforcing Agency – Division of the State Architect – Structural Safety (DSA-SS).

The Division of the State Architect has been delegated the responsibility and authority by the Department of General Services to review and approve the design and oversee and observe the construction of public elementary and secondary schools, community colleges, and state-owned or state-leased essential services buildings.

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1.9.2.1.1 Adopting Agency Identification.

The provisions of this code applicable to buildings identified in this Subsection 1.9.2.1 will be identified in the Matrix Adoption Tables under the acronym DSA-SS.

1.9.2.2 DSA-SS/CC (Division of the State Architect – Structural Safety/Community Colleges).

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Enforcing Agency – Division of the State Architect – Structural Safety/Community Colleges (DSA-SS/CC).

The Division of the State Architect has been delegated the authority by the Department of General Services to review and approve the design and oversee and observe the construction of community colleges electing to use the alternative building standards as provided in this section.

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DIVISION II
DIVISION II
ADMINISTRATION



101.0 General.

101.1 Title. This document shall be known as the "California Plumbing CodeUniform Plumbing Code", may be cited as such, and will be referred to herein as "this code."

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DSA proposes to adopt Chapter 2 (Definitions) of the 2018 edition UPC with existing California amendment carried forward into the 2019 edition CPC.

CHAPTER 2
DEFINITIONS

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DSA proposes to adopt Chapter 3 (General Regulations) of the 2018 edition UPC with existing California amendments carried forward into the 2019 edition CPC.

CHAPTER 3
GENERAL REGULATIONS

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DSA proposes to adopt Chapter 4 (Plumbing Fixtures and Fixture Fittings) of the 2018 edition UPC with existing DSA and California amendments carried forward, including minor editorial edits noted, into the 2019 edition CPC.

Adopting Agency	DSA-SS	DSA-SS/CC	Comments
Adopt Entire Chapter as amended (amended sections listed below)	X	X	
401.3	X	X	
407.2.2.1	X	X	
408.2.1	X	X	
408.2.2	X	X	
408.2.3	X	X	
408.2.4	X	X	
408.5	X	X	
411.2	X	X	
411.2.3.1	X	X	
411.2.4	X	X	
412.1	X	X	
412.1.1	X	X	

412.1.2	X	X	
412.1.3	X	X	
417.1.1	X	X	
417.1.2	X	X	
420.2.1	X	X	
422.1	X	X	
Table 422.1	X	X	
Table A	X	X	

CHAPTER 4 PLUMBING FIXTURES AND FIXTURE FITTINGS



408.0 Showers.

408.2.1 Single Showerhead [DSA-SS & DSA-SS/CC]. Showerheads shall have a maximum flow rate of not more than 1.8 gallons (6.81 L) per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads in compliance with Chapter 5, Division 5.3 of the California Green Building Standards Code (CALGreen).

408.2.2 Multiple Showerheads Serving One Shower [DSA-SS & DSA-SS/CC]. When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons (6.81 L) per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time in compliance with Chapter 5, Division 5.3 of the California Green Building Standards Code (CALGreen).

Note: A hand-held shower shall be considered a showerhead.

~~**408.2.3 Single Showerhead [DSA-SS & DSA-SS/CC].** Showerheads shall have a maximum flow rate of not more than 1.8 gallons (6.8 L) per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads in compliance with the California Energy Commission 2015 Appliance Efficiency Regulations (CCR Title 20, Article 4, Section 1605.3[h][5]).~~

~~**408.2.4 Multiple Showerheads Serving One Shower [DSA-SS & DSA-SS/CC].** When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons (6.81 L) per minute at 80 psi, or the shower shall be designed to allow only one shower to be in operation at a time in compliance with the California Energy Commission 2015 Appliance Efficiency Regulations (CCR Title 20, Article 4, Section 1605.3[h][5]).~~

411.2 Water Consumption. *The effective flush volume of all water closets shall not exceed 1.28 gallons (4.8 L) per flush when tested in accordance with ASME A112.19.2/CSA B45.1.*

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411.2.4 Water Closets [DSA-SS & DSA-SS/CC]. *The effective flush volume of all water closets shall not exceed 1.28 gallons (4.8 L) per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type Toilets in compliance with Chapter 5, Division 5.3 of the California Green Building Standards Code (CALGreen).*

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412.0 Urinals.

412.1 Application. Urinals shall comply with ASME A112.19.2/CSA B45.1, ASME A112.19.19, or CSA B45.5/IAPMO Z124. *Wall-mounted urinals shall have an average water consumption not to exceed 0.125 gallons (0.47 L) per flush. Other urinals shall have an average water consumption not to exceed 0.5 gallons (1.89 L) per flush.*

412.1.1 Wall-Mounted Urinals [DSA-SS & DSA-SS/CC]. *The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons (0.47 L) per flush in compliance with Chapter 5, Division 5.3, of the California Green Building Standards Code [CALGreen].*

412.1.2 Floor-Mounted Urinals [DSA-SS & DSA-SS/CC]. *The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons (1.89 L) per flush in compliance with Chapter 5, Division 5.3, of the California Green Building Standards Code [CALGreen].*

412.1.3 Nonwater Urinals. Nonwater urinals shall have a liquid barrier sealant to maintain a trap seal. Nonwater urinals shall permit the uninhibited flow of waste through the urinal to the sanitary drainage system. Nonwater urinals shall be cleaned and maintained in accordance with the manufacturer's instructions after installation. Where nonwater urinals are installed, not less than one water supplied fixture rated at not less than 1 water supply fixture unit (WSFU) shall be installed upstream on the same drain line to facilitate drain line flow and rinsing. Where nonwater urinals are installed, they shall have a water distribution line rough-in to the urinal location to allow for the installation of an approved backflow prevention device in the event of a retrofit. *For additional information, see Health and Safety Code Section 17921.4.*

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422.0 Minimum Number of Required Fixtures.

422.1 Fixture Count. Plumbing fixtures shall be provided for the type of building occupancy and in the minimum number shown in Table 422.1. The total occupant load and occupancy classification shall be determined in accordance with Occupant Load



Factor Table A and the California Building Code or **[DSA-SS & DSA-SS/CC]** Occupant Load Factor Table A. Occupancy classification not shown in Table 422.1 shall be considered separately by the Authority Having Jurisdiction.

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TABLE A.
OCCUPANT LOAD FACTOR:
[DSA-SS & DSA-SS/CC]



OCCUPANCY, **	OCCUPANT LOAD FACTOR (square feet)
Group A	
1. Auditoriums, convention halls, dance floors, lodge rooms, stadiums, and casinos (where no fixed seating is provided). (Where fixed seating is provided use 1/2 "one-half" the number of fixed seating.)	15
2. Conference rooms, dining rooms, drinking establishments, exhibit rooms, gymnasiums, lounges, stages, and similar uses, including restaurants classified as Group B occupancies.	30
3. Worship places; principal assembly area, educational and activity unit (where no fixed seating is provided). (Where fixed seating is provided use 1/2 "one-half" the number of fixed seating.)	30
Group B Office or public buildings (area accessible to the public)	200
Group E Schools for day care, elementary, secondary	50
Educational Facilities Other than Group E Colleges, universities, adult centers, etc.	50
Group F Workshops, foundries and similar establishments	2,000
Group H Hazardous materials fabrication and storage	2,000
Group I Hospital general use area, health care facilities	200



Group M Retail or wholesale stores	200
Group R Congregate residence, Group R-1	200
Group S Warehouse	5,000

* Any uses not specifically listed shall be based on similar uses listed in this table.

** For building or space with mixed occupancies, use appropriate occupancy group for each area (for example, a school may have an "A" occupancy for the gymnasium, a "B" occupancy for the office, an "E" occupancy for the classrooms, etc.).

Accessory areas may be excluded (for example: hallway, restroom, stair enclosure).

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DSA proposes to adopt Chapter 5 (Water Heaters) of the 2018 edition UPC with existing California amendment carried forward into the 2019 edition CPC.

Adopting Agency	DSA-SS	DSA-SS/CC	Comments
Adopt Entire Chapter as amended (amended sections listed below)	X	X	
507.2507.2	X	X	

CHAPTER 5 WATER HEATERS

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DSA proposes to adopt Chapter 6 (Water Supply and Distribution) of the 2018 edition UPC with existing DSA and California amendments carried forward, including minor editorial edits noted, into the 2019 edition CPC.

Adopting Agency	DSA-SS	DSA-SS/CC	Comments
Adopt Entire Chapter as amended (amended sections listed below)	X	X	
603.5.14603.5.14, Note	X	X	
Table 604.1 Notes	X	X	
604.1.2	X	X	
605.9	X	X	
605.9.1	X	X	
605.10	X	X	
605.15	X	X	
607.1	X	X	

CHAPTER 6



WATER SUPPLY AND DISTRIBUTION

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TABLE 604.1
MATERIALS FOR BUILDING SUPPLY AND WATER DISTRIBUTION PIPING AND FITTINGS

MATERIAL	BUILDING SUPPLY PIPE AND FITTINGS	WATER DISTRIBUTION PIPE AND FITTINGS	REFERENCED STANDARD(S) PIPE	REFERENCED STANDARD(S) FITTINGS
Copper and Copper Alloys	X	X	...	
...				
PEX ^{2,3,4}	X	X	...	
PEX-AL- PEX ⁴⁵	X	X	...	
...				

Notes:

- 1 For building supply or exterior cold-water applications, not for water distribution piping.
- 2 For brazed fittings only.
- 3 *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.*
- 4 *PEX tubing shall meet or exceed the requirements of ASTM F876-2013a or an equivalent or more stringent standard when used in continuously recirculating hot water systems and the PEX tubing is exposed to the hot water 100% of the time.*
- 5 **[For DSA-SS, DSA-SS/CC]** *The use of PEX-AL-PEX in potable water supply systems is not adopted.*

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DSA proposes to adopt Chapter 7 (Sanitary Drainage) of the 2018 edition UPC with existing California amendment carried forward into the 2019 edition CPC.

CHAPTER 7 SANITARY DRAINAGE

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DSA proposes to adopt Chapter 8 (Indirect Wastes) of the 2018 edition UPC into the 2019 edition CPC, without amendment.



**CHAPTER 8
INDIRECT WASTES**

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DSA proposes to adopt Chapter 9 (Vents) of the 2018 edition UPC with existing California amendment carried forward into the 2019 edition CPC.

**CHAPTER 9
VENTS**

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DSA proposes to adopt Chapter 10 (Traps and Interceptors) of the 2018 edition UPC into the 2019 edition CPC, without amendment.

**CHAPTER 10
TRAPS AND INTERCEPTORS**

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DSA proposes to adopt Chapter 11 (Storm Drainage) of the 2018 edition UPC with existing California amendment carried forward into the 2019 edition CPC.

**CHAPTER 11
STORM DRAINAGE**

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DSA proposes to adopt Chapter 12 (Fuel Gas Piping) of the 2018 edition UPC with existing California amendments carried forward into the 2019 edition CPC.

**CHAPTER 12
FUEL GAS PIPING**

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**DSA proposes to not adopt Chapters 13, 14, 15 or 16 of the 2018 edition UPC.
DSA did not adopt Chapters 13, 14, 15 or 16 of the 2015 edition UPC.**

**CHAPTER 13—HEALTH CARE FACILITIES AND MEDICAL GAS AND MEDICAL
VACUUM SYSTEMS**

CHAPTER 14—FIRESTOP PROTECTION

**CHAPTER 15—ALTERNATE WATER SOURCES FOR NONPOTABLE
APPLICATIONS**

CHAPTER 16—NONPOTABLE RAINWATER CATCHMENT SYSTEMS

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DSA proposes to adopt Chapter 17 (Referenced Standards) of the 2018 edition UPC with existing CA amendments carried forward into the 2019 edition CPC.

CHAPTER 17 REFERENCED STANDARDS

Adopting Agency	DSA-SS	DSA-SS/CC	Comments
Adopt Entire Chapter	X	X	
Adopt Entire Chapter as amended (amended sections listed below)	X	X	
Table 1701.1	X	X	
Table 1701.2	X	X	



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DSA proposes to adopt Appendix A (Recommended Rules for Sizing the Water Supply System) of the 2018 edition UPC into the 2019 edition CPC, without amendment.

APPENDIX A RECOMMENDED RULES FOR SIZING THE WATER SUPPLY SYSTEM

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DSA proposes to adopt Appendix B (Explanatory Notes on Combination Waste and Vent Systems) of the 2018 edition UPC into the 2019 edition CPC, without amendment.

APPENDIX B EXPLANATORY NOTES ON COMBINATION WASTE AND VENT SYSTEMS

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DSA proposes to not adopt Appendix C (Alternate Plumbing Systems) of the 2018 edition UPC. DSA did not adopt Appendix C (Alternate Plumbing Systems) of the 2015 edition UPC.

APPENDIX C ALTERNATE PLUMBING SYSTEMS

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DSA proposes to adopt Appendix D (Sizing Storm Water Drainage Systems) of the 2018 edition UPC into the 2019 edition CPC, without amendment.

APPENDIX D SIZING STORM WATER DRAINAGE SYSTEMS



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DSA proposes to not adopt Appendices E, F or G of the 2018 edition UPC. DSA did not adopt Appendices E, F or G of the 2015 edition UPC.

APPENDIX E—MANUFACTURED/MOBILE HOME PARKS AND RECREATIONAL VEHICLE PARKS

APPENDIX F—FIREFIGHTER BREATHING AIR REPLENISHMENT SYSTEMS

APPENDIX G—SIZING OF VENTING SYSTEMS

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DSA proposes to adopt Appendix H (Private Sewage Disposal Systems) of the 2018 edition UPC into the 2019 edition CPC, without amendment.

**APPENDIX H
PRIVATE SEWAGE DISPOSAL SYSTEMS**

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DSA proposes to adopt Appendix I (Installation Standard for PEX Tubing Systems for Hot- and Cold-Water Distribution) of the 2018 UPC into the 2019 edition CPC. DSA did not adopt Appendix I (Installation Standards) of the 2015 edition UPC.

**APPENDIX I
INSTALLATION STANDARD FOR PEX TUBING SYSTEMS FOR HOT- AND COLD-
WATER DISTRIBUTION**

Adopting Agency	DSA-SS	DSA-SS/CC	Comments
Adopt Entire Chapter	X	X	

...

"The information contained in this appendix is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this appendix may contain material that has not been subjected to public review or a consensus period. In addition, it does not contain requirements necessary for conformance to the standard."

The following IAPMO Installation Standard is included here for the convenience of the users of the California Plumbing Code~~Uniform Plumbing Code~~. It is not considered as a part of the California Plumbing Code~~Uniform Plumbing Code~~ unless formally adopted as such. This installation standard is an independent, stand-alone document published by the International Association of Plumbing and Mechanical Officials and is printed herein by the expressed written permission of IAPMO.

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DSA proposes to not adopt Appendices J, K or L of the 2018 edition UPC. DSA did not adopt Appendices J, K or L of the 2015 edition UPC.

APPENDIX J—COMBINATION OF INDOOR AND OUTDOOR COMBUSTION AND VENTILATION OPENING DESIGN

APPENDIX K—POTABLE RAINWATER CATCHMENT SYSTEMS

APPENDIX L—SUSTAINABLE PRACTICES

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DSA is not proposing the adoption of Appendix M (Peak Water Demand Calculator) of the 2018 edition UPC, which is a new Appendix.

**APPENDIX M
PEAK WATER DEMAND CALCULATOR**

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Notation for [DSA-SS]

Authority: Education Code § 17310 and 81142, and Health and Safety Code § 16022.

Reference: Education Code §§ 17280–17317, 81130–81147 and Health and Safety Code §§ 16000 through 16023.

Notation for [DSA-SS/CC]

Authority: Education Code § 81053.

Reference: Education Code §§ 81052, 81053, and 81130–81147.

